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# The Journal

OF THE

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FREDERICK C. WARNSHUIS, M.D., F.A.C.S.  
EDITOR

GRAND RAPIDS, MICHIGAN





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# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVI

GRAND RAPIDS, MICHIGAN, JANUARY, 1917

No. 1

### Original Articles

#### CHAIRMAN'S ADDRESS—SURGERY—

#### "TO BE FOREWARNED IS TO BE FOREARMED." \*

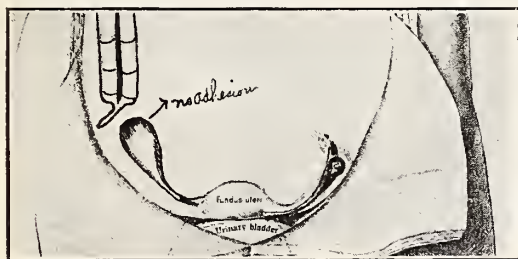
ALEXANDER MCKENZIE, M.D.

PORT HURON, MICH.

In these military times the full meaning of the above aphorism has been fully demonstrated. Perhaps no countries have ever realized their sorry plight as did England, France and Russia at the outbreak of the present European War. And why their lack of preparedness? Because of their lack of knowledge of the mightiness and of the highly organized state of their enemies.

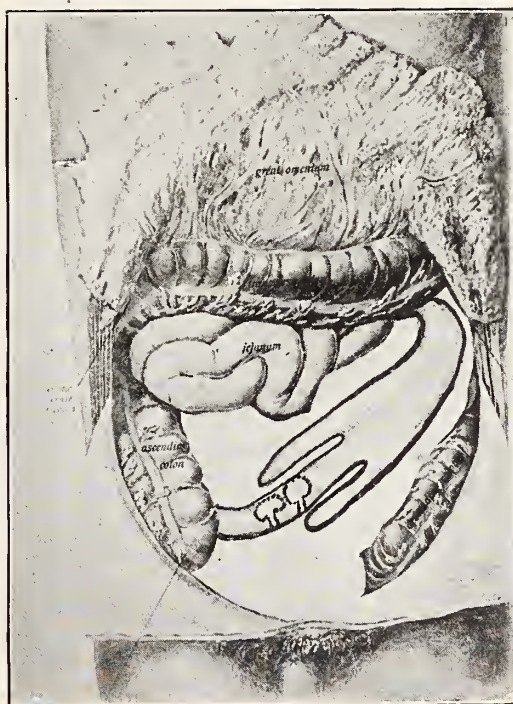
The ever present enemy of the physician and

must first be able to interpret correctly the warnings which disease constantly gives us and then we shall be better prepared to oppose it with our "arms of precision." To be always able to manifest that diagnostic acumen so necessary for the defeat of our enemy and for the welfare of our patient requires us to be thinkers, not of the superficial type, but of the deep and serious. We must be students, bending ever to our task.



surgeon is disease with all its multitudinous phases and its ever increasing complexities, yes, and I am prompted to add, its strategies. As an evidence of the latter did you ever have the streptococci and the staphylococci and the colon bacilli play "hide and seek" with you in the abdomen? That appendix case that you drained satisfactorily as you thought, a week or so after operation showed the presence of an abscess behind the bladder, or an abscess in the left abdominal quadrant, or an abscess in front of the sacrum behind the intestines, or an abscess under the diaphragm. Or you have done, perhaps, a hysterectomy complicated by adhesions but you did not drain, and how you wished you had when the after symptoms showed suppuration in the pelvis:

If we are to be masters of the situation, we



Do not the majority of us know of patients who had their appendices removed for a supposed appendicitis when the true diagnosis was either a right sided lobar pneumonia, or a typhoid fever, or a renal calculus, or a pus tube, or a pyelitis? The warnings were given, but owing to injudicious cortication due to hasty diagnosis and lack of attention to detail, the wrong method of attack was used, greatly to the chagrin of the surgeon and to the detriment of the patient.

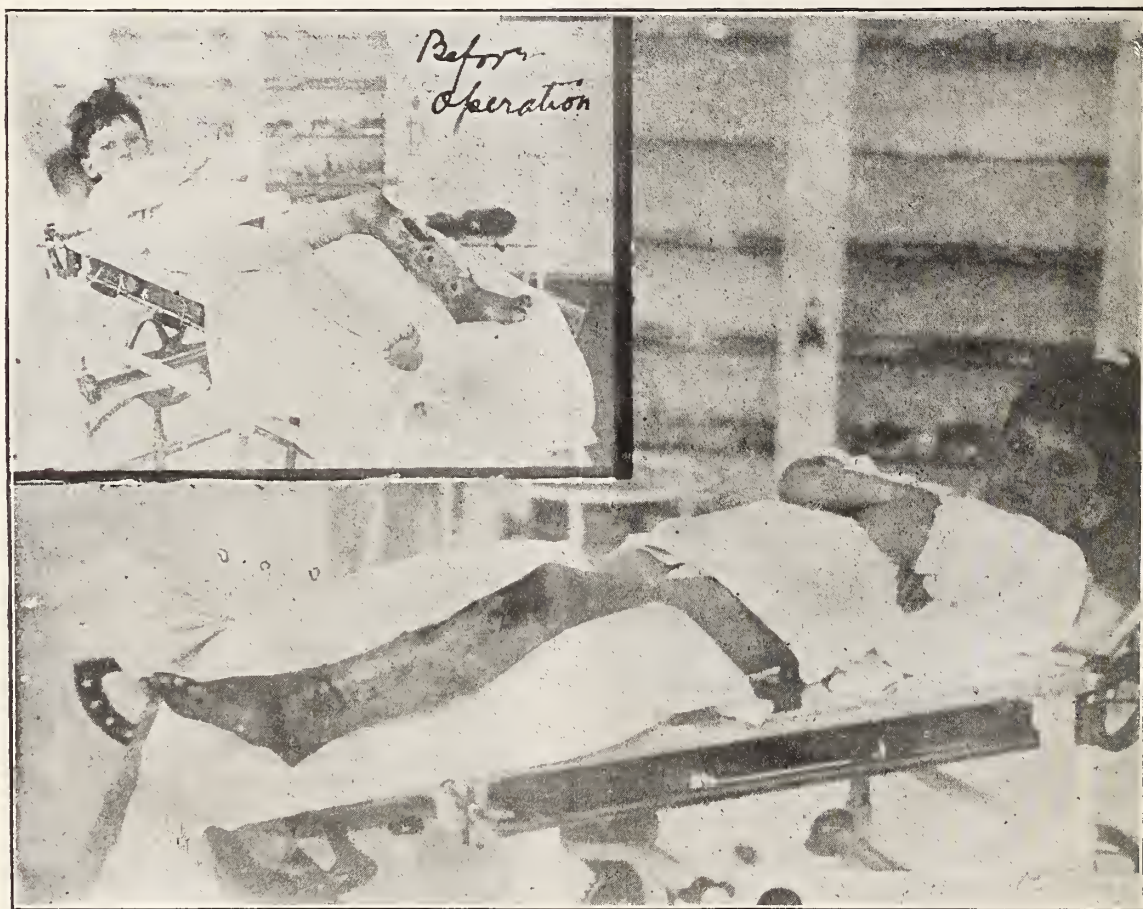
But enough of such censure. God knows we get enough of that even when we have done our

\*Fifty-First Annual Meeting, M.S.M.S., Houghton, August, 1916.



duty. Let us be more charitable with one another and briefly consider symptomatology, early or late, as the case may be. A few months ago I had a case of thumb infection which, notwithstanding early incision, extended to the palmar fascia and forearm where for some time the infection remained localized, when suddenly, one day, patient suffered one-half hour chill, temperature 104, pulse in proportion, pain in left chest and cough. A mental reservation was made that probably later this case would show itself to be one of empyema, and so, frequently, under strict asepsis, I needled his chest for pus, but would usually be rewarded with a few drops

rogating his wife, I learned that, after his return from the hospital, she had been daily in the habit of squeezing one of the incisions to evacuate the pus. May not this have forced the micro-organisms into the blood stream? To quote from Ochsner: "Above all things, these extremities should neither be squeezed nor manipulated. We have frequently seen a patient's temperature rise several degrees and the infection progress to a marked extent after such manipulation. One frequently observes a physician squeezing and crushing these inflamed tissues for several minutes to no purpose apparently, while he is collecting his sluggish thoughts."



of bloody serum. After a lapse of three or four weeks, extreme septic symptoms being still quite manifest, on this particular day an earnest search for pus was made, and, after four different insertions of the needle a sacculated empyema was found under the left scapula. Owing to his precarious and exhausted condition, under local anesthesia, and without rib resection, this was drained in the usual way with uneventful recovery in about ten weeks. Undoubtedly this human wreck was saved because of early anticipation of what might transpire.

As to why empyema developed in this case, of course is open to conjecture, but upon inter-

Two years ago a case was presented to me with the diagnosis of gall stones. A young man, 20 years of age, who for five years previous to operation, about once a month suffered from attacks of belly ache. One month prior to operation attacks came every two to seven days, lasting five to twelve hours. He vomited greenish material and had marked borborygmus.

In making a routine examination, two small polypi were found in the rectum. Here then, was a possible warning. Might there not be polypi higher up? During one of his intensely painful attacks it was observed that an ill defined sausage shaped tumor was seen to rise and



fall. Operation revealed two polypi, each the size of a hen's egg, with pedicles two inches long, in the lower portion of ilium. The proximal portion of ilium was distended till it looked like an automobile inner tube inflated; the inflated portion dropping over the distal deflated

kind forbearance, I am going to unburden mine.

I hope that you will not consider me presumptuous if I say that I always felt that I could differentiate between an acute appendicitis and a right side pyosalpinx. My case presented the following symptoms: Single woman of twenty



portion like a half inverted sleeve. Obstruction was not complete so gas could pass and therefore the abdomen showed no great distention. Recovery after operation was uneventful.

There is an old saying that "An open confession is good for the soul," and so, with your

years with the classical syndrome of pain, exquisitely marked over McBurney's point, nausea, vomiting, rigidity of right rectus, temperature 101, pulse 96. Vaginal examination showed that uterus could be tilted in all directions, and no mass could be felt. The patient had been



ineapacitated and in pain for six hours.

Upon delivering the appendix I tried to think that it was "injected" and "slightly distended." As a matter of fact it was normal. Palpation of the uterus showed its free movability. About an inch from the right horn an induration of about one inch in length and the thickness of a lead pencil, was found. Here was the warning. Upon following up this "lead," an elon-

wounds which would have remained free from that infection with its dire consequences had we but given the prophylactic injection of antitetanic serum at the time of the injury and repeated every eight to fifteen days because of the rapid elimination of the antitoxin.

The wounds such as those received from bullets, garden soil contamination, machinery, etc., display the crimson warning that we owe



gated, pear shaped pus tube, nestling close to the cecum and without adhesions, was delivered.

Pardon the affront, if as such you take it, because of my reference to so common a pathology as appendicitis and pyosalpinx, but imagine the discomfiture of the surgeon who would have removed the appendix and overlooked the pus tube.

Have we not all seen tetanus develop in

it to our patient, regardless of expense, the immediate injection of antitetanic serum.

Reports from the European battlefields tell us that in hospitals where it is used as a routine measure in all wounds, the proportion of tetanic cases is reduced to 0.418 per cent. Given only in suspicious cases the rate is 1.279 per cent.

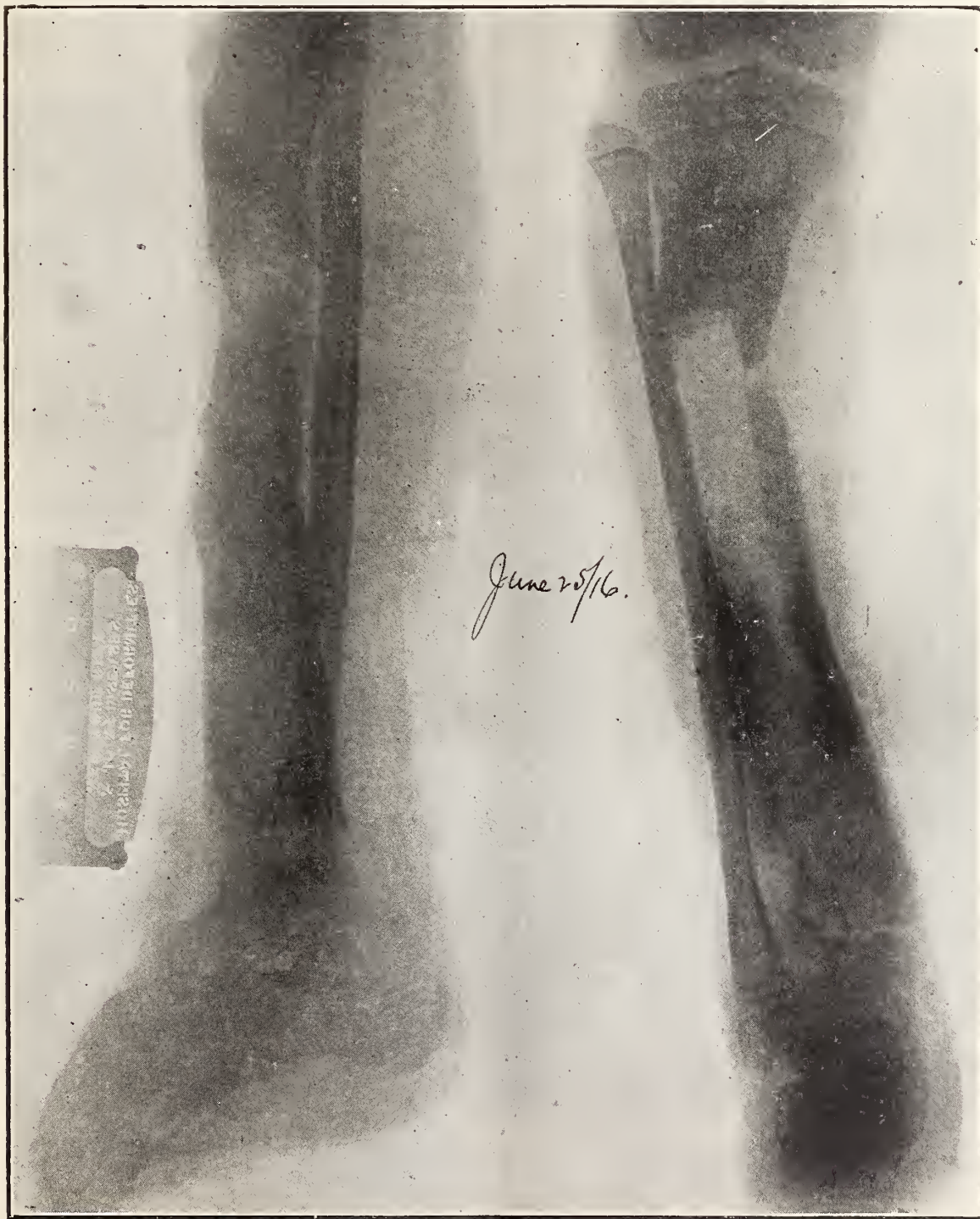
Ordinarily we look upon amputations of extremities as not belonging to the same "social



set," if I may use the expression, as cholecystostomies, hysterectomies, gastroenterostomies, etc., and yet to our patient, the one is as important as the other. Which is the more comfortable, a painful stump or a hydropic gall bladder that periodically opens and closes?

development of connective tissue and consequently a neuroma.

Let us follow the advice of that master surgeon Murphy and split the nerve three-quarters of an inch from its end making a half rectangle, folding the vertical portion on its self to meet



I plead for more attention and care in amputation. While we may have severed the bone sufficiently high, cut short the tendons, etc., yet this will not be a guarantee of comfort to our patient if we allow the axon ends of the nerve to stick out like brush ends, thus favoring the

the horizontal portion and thus closing the circuit.

Instinctively we do not relish the thought of performing abdominal hysterectomy for fibroid on patients with hemoglobin less than 40 per cent. Feeling somewhat elated because I had



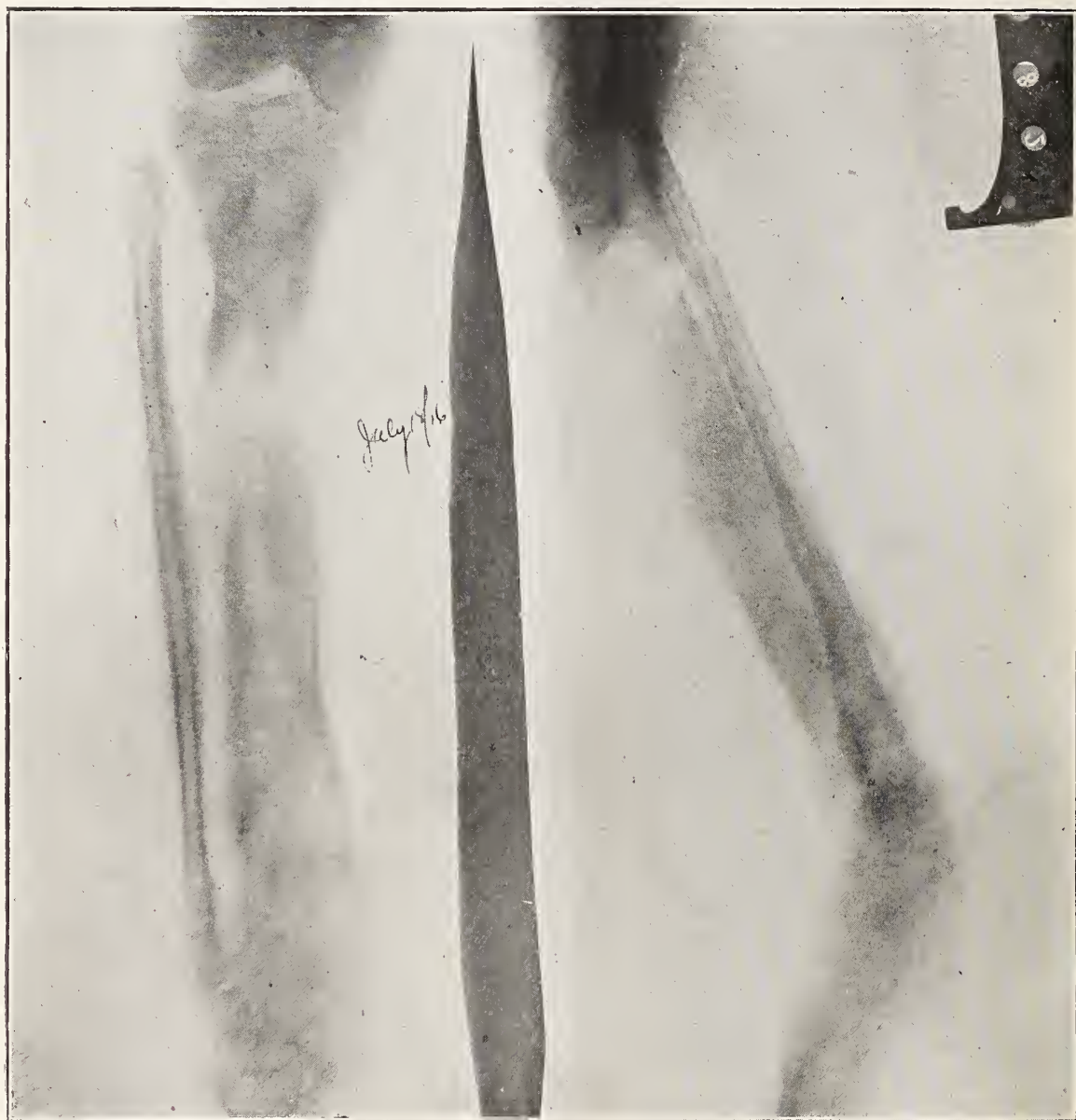
successfully hysterectomized a patient for large myomatous and submucous fibroid with 25 per cent. hemoglobin, I found upon looking up the literature that Cullen's observation after statistical study in the "Johns Hopkins Hospital and University," were that hysterectomy may be safely undertaken in cases with low hemoglobin, even less than 25 per cent.

Notwithstanding the fact that weeks were

as practiced by Murphy, Lane, Angus McLean and others, as well as many of you that are present today.

Some one has said that to amputate an extremity is a sign of defeat. How few defeats today? But alas! how many, even ten years ago?

I vividly recall the case of an eight year old boy with acute osteomyelitis of the upper third



spent, prior to the operation, in endeavoring to raise the per cent. of hemoglobin by the injection of sodium cacodylate and iron, and by the administration of general tonic treatment with rest in bed, the hemoglobin remained the same. So that I believe nothing is gained by delay in these cases.

I cannot conclude my paper without paying tribute to those surgeons who have blazed the trail in the conservative bone surgery of today

of the tibia. Eleven years ago the family physician treated it daily for two weeks, at least, for "rheumatism." The warning signs were not heeded. Not even a gimlet hole was drilled to liberate the necrotising pus. At operation leg was amputated at the knee.

Today, with our knowledge of bone grafting and bone regeneration, such a fate as the above is no longer tenable. Let me illustrate by briefly referring to the following case of Dr. H.

Frauenthal of the Hospital of Deformities and Joint Diseases, New York. May 18, 1916, while attending his clinic, this case was operated upon by him. He very kindly sent me a report of the case with radiograms.

*History of Case.*—"Nine months ago, Andrew

time, several sinuses had formed and a large portion of the tibia, bathed in offensive pus, protruded from the wound to the extent of three or four inches."

Dr. Frauenthal carefully studied the radiograms and saw that regeneration was going on from the epiphyscal ends and at once decided that amputation was not indicated and the result is that Andrew Billy has his leg and will retain it.

In conclusion let me ask that we pay more attention to the finer symptoms of disease rather than the gross, for even then with all our knowledge of the enemy, with all our skill, equipment and accoutrement—in the words of Charles Kingsley:

"Everywhere, skin deep below our boasted science we are brought up short by mystery impalpable, and by the adamantine gates of transcendental forces and incomprehensible laws, of which the Lord, who is both God and man, alone holds the key and alone can break the seal."

#### THE DIAGNOSIS AND SIGNIFICANCE OF TUBERCULOUS BRONCHIAL GLANDS.\*

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It has been proposed that clinical tuberculosis be divided into three stages as is syphilis. This plan has a certain usefulness in emphasizing the chronicity of pathology in phthisis.

A feature common to both syphilis and tuberculosis is that the stage of invasion produces very little or no general reaction on the part of the defensive mechanism of the body. Possibly one-half the primary lesions of syphilis in the male are seen by a physician; in the female not one-fourth are seen. By far the greater number then are never seen or recognized by a physician.

In tuberculosis we may say the primary lesion is never seen and never recognized and never treated. The primary lesion will usually be found under the epithelium of the respiratory or alimentary tract, or in a tonsil. Having penetrated the epithelial layer the organism proceeds to multiply in the lymph spaces. The usual inflammatory changes occur in the contiguous cells on a miniature scale. There is no systemic reaction demonstrable at this stage. This may be called the *First Stage* of tuberculosis. It may last many weeks. A very large

\*Read before the Medical Section of the M.S.M.S., Houghton, August, 1916.



Billy, age nine, suffered a compound fracture of the tibia. The leg gradually became swollen and red and pus began to discharge from the wound so that several weeks later, when taken to a hospital, it was noticed that a secondary chronic osteomyelitis accompanied the fracture. Two physicians advised immediate amputation but parents would not consent. In the mean



number of human tuberculous infections are terminated at this point, and a certain immunity undoubtedly secured. Such an individual may give a positive von Pirquet test. Post-mortem the initial lesion can be found only by the most careful examination. We know that the majority of individuals in civilized communities pass through this stage in childhood.

The *Second Stage* of tuberculosis is always glandular. The location is dependent upon the location of the initial lesion. If this is in the lung, the bronchial glands are next affected. Bacilli overcoming the resistance of the original focus, are carried to the nearest defensive glandular system. Here again the natural defensive forces may successfully resist the invasion, and may confine and isolate the bacilli. Clinical experience would indicate that the most successful natural immunity is obtained at about this stage. If the resistance is imperfect, the bacilli continue to multiply and to attack gland after gland with resulting inflammatory changes. At a certain point in this process, symptoms occur, and here is the clinical picture to which we wish to call attention today.

The extension of inflammatory changes to the peri-glandular tissue *at any point*, would constitute the beginning of a *Third Stage*. This may be either chronic pulmonary tuberculosis known as phthisis; or it may take a more acute form, such as miliary or meningeal tuberculosis. In this stage also belong all other forms of frank clinical tuberculosis, none of which are primary.

Bronchial gland infection affects chiefly three groups: viz., peri-tracheal, hilus and peri-bronchial. Variations in signs and symptoms are produced by the degree to which the different groups are affected. The enlargement of any of these glands, it will be noted, produces increase in the density of the mediastinum, and this as will be seen later, constitutes an important point in the diagnosis.

Since primary tuberculous infection is so widespread in childhood, and frank pulmonary tuberculosis so often appears in adult life, we are forced to conclude that many years often elapse between the second and third stages, whereas the beginning, at least, of the second stage follows immediately after the first.

We have long taught that early recognition of tuberculosis was essential for its successful medical treatment. It follows then that emphasizing the importance of recognition of the second stage, or childhood form, is in accordance with modern views on the subject. A

word of caution should be added. The condition here described is merely a stage in a progressive condition and not to be considered a clinical entity. In a rapidly progressive case it could barely be recognized. In slower cases, however, the second stage undoubtedly lasts many months, and there can be no question of the importance of its recognition at this time.

The diagnosis is made by the consideration of four groups of facts: 1. the history of exposure; 2, the presence of symptoms otherwise unexplained; 3, the physical signs including X-ray examination; and 4, specific reaction to tuberculin.

1. An infant living in contact with an open case of tuberculosis practically never escapes infection. Attention or care by a tuberculous nurse likewise frequently provides the source of the disease. Such a history is strong predisposing evidence in favor of tuberculous infection having taken place.

2. The symptoms, as would be expected, are somewhat indefinite. The most frequent early symptom is the decline of customary activity with increased irritability.

Loss of appetite and failure to gain in weight follow. Many times the mother notes repeated fleeting periods of marked pallor. The temperature range is slightly disturbed. Cough may or may not be present. It is usually brassy, paroxysmal, and ineffective. Change of voice and frequent hoarseness may be noted. Attacks of paroxysmal dyspnea are characteristic and highly suggestive. They are usually described as "spells," with "fighting for breath." They are frequently confused with whooping cough. Later there may be continuous fever, shortness of breath, rapid wasting and anemia as the third stage is reached.

3. There are none of the usual physical signs of phthisis found at this stage. The findings do show increased mediastinal density. This can be determined in two ways: D'Espin's sign, and direct percussion over the vertebrae. D'Espin's sign is elicited by listening to the transmission of the whispered voice over the cervical and upper dorsal vertebrae. Normally the intensity diminishes markedly at the first dorsal. When it persists below this, there must be increased mediastinal density. One's findings with D'Espin's sign may be corroborated by direct percussion over the same vertebrae. The same conditions which produce the increased transmission of the whispered voice will also produce dullness upon percussion.

A third sign invariably found with well developed mediastinal tuberculosis is a varia-

tion in intensity of inspiration in the lower interscapular spaces. The increased intensity may be on either side but is usually quite marked.

These findings should always be certified by an X-ray examination. The increased density of the mediastinum can be easily demonstrated. Such accidental causes of this condition as malignant new growth, enlarged thymus, pericarditis or opaque foreign body, may be ruled out of consideration. The glandular character of the increased density may be proven. Some information as to the age of the process may be gained.

4. Specific reactions may be obtained by use of the von Pirquet test for the first three years of life; later the Calmette test may be used if no contraindication exists. A positive result of either test as above limited means an active tuberculous process. A negative result may be disregarded in the presence of other strong evidence. In such cases one must make a decision without the aid of the specific reaction.

Differentially perhaps the most difficult distinction is from the early stage of a mediastinal malignant tumor. Here the symptoms and physical signs will be the same, gradually changing, of course, as the tumor grows larger. The X-ray is our greatest help here.

The most frequent distinction must be made immediately following convalescence from pneumonias. Physical signs of mediastinal density may persist after the signs in the lungs have cleared. When fever and malaise continue one may find the situation difficult. A positive von Pirquet or Calmette here will make our diagnosis certain. Measles without pneumonia may also be followed by enlarged bronchial glands. In either case the history of immediately preceding diseases puts one on guard. Other conditions such as Hodgkin's disease and empyema should present no difficulties.

This condition in infancy passes so rapidly into general tuberculosis that it can probably never be recognized during the first year of life and rarely during the second. From this age, however, its frequency increases rapidly up to about the eighth year. After this its recognition becomes more difficult and symptoms will usually be accompanied by the customary signs of early involvement of the lung.

The essential factors in the progress of the disease are apparently the virulence and number of organisms which succeed in entering the body. If the number is overwhelming, they are rapidly disseminated, and death soon re-

sults from acute general tuberculous infection. On the other hand if the number of invading organisms is small and the defensive organs of the body are able to enclose and isolate them, then the body slowly develops specific resistance to the tubercle bacillus.

The matter of preventing massive infection, then, assumes the highest importance. It is easy to believe that the very high death rate of tuberculosis in infancy depends not alone on the absence of specific resistance but also on the occurrence of repeated and overwhelming infections. Our belief in this is strengthened by the frequency with which infants recover when removed from the source of their infection and given residence in a suitable place with good care.

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#### THE PRACTICAL VALUE OF THE POLYGRAPH IN THE DIAGNOSIS OF CARDIAC DISORDERS.

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Since the discovery of the circulation of the blood by Harvey in 1628 there have been numerous valuable contributions to our knowledge of cardiac physiology and pathology. In 1760 Morgagni's work on the Seats and Causes of Diseases appeared. In this he records the observations of a pulsation in the jugular veins which is quite distinct from that of the carotids: he also made the further observation that there were two phases in the venous pulse, one synchronous with the arterial pulse, therefore due to ventricular systole, the other synchronous with auricular systole, therefore due to the action of the auricle.

As far as we have been able to learn, Morgagni was the first to call attention to the association of an unusually slow pulse with epileptiform seizures, a condition which we now recognize as heart-block.

During the early years of the last century Corvisart published his splendid work which dealt quite in detail with cardiac pathology, and in which he made a strong plea for a closer association and study between the clinical signs and those observed in the post mortem room.

Leannee, a pupil of Corvisart, in his invention of the stethoscope did much to bring the art of auscultation to its present state of perfection.

It is interesting to note some of the early theories advanced to explain the cause of the rhythmic and orderly contractions of the normal heart. In 1773 Senae advanced the idea



that the venae cava possessed the power of contraction and that by virtue of this contractile power forced the blood into the auricle.

In Haller's time the cause of the rhythmic action of the heart was thought to be due to the immediate action of the blood as it flowed through the auricles and ventricles. This theory soon became obsolete when it was discovered that the heart of the turtle and frog would continue to beat rhythmically after removal from the body.

The theory was then advanced that the cardiac tissue possessed some inherent automatic rhythmical power.

In 1848, Remak discovered a group of ganglion cells in the sinus venosus of the frog's heart and later Bidder discovered two large masses in the auriculoventricular groove. Ludwig also observed some in the interauricular septum. These discoveries gave rise to the theory that Remak's ganglia was a center from which automatic impulses were sent out to the cardiac tissues at regular intervals and was the center which governed the rhythmic action of the heart, being supplemented by Bidder's ganglia, which were supposed to exert a coordinating influence.

Such were the essential facts concerning the cause of the rhythmic contractions of the chambers of the heart in 1881 when Gaskell began his epoch making researches relating to the excitatory and connecting muscular systems of the heart and from which he came to the conclusion that the beat of the heart starts from that part which is most rhythmical, that is, which beats spontaneously at the quickest rate, and travels as a wave of contraction over the rest of the heart at rates of speed which vary in different parts according to the nature of the muscular tissue.

The experiments from which these important facts were gleaned were performed on cold blooded animals and for this reason it was argued by some that the sequence of beats in the animal must be due to some special arrangement of the nervous mechanism, because the muscular tissue of the auricles is completely disconnected from that of the ventricles.

Later investigations revealed the incorrectness of this position for Kent and Krehl, and also Romberg demonstrated that there is in mammals a muscular connection between the auricles and ventricles quite sufficient for the passage of a contraction wave, just as had already been shown to exist in the heart of the frog, tortoise and eel.

These fundamental facts relating to the cause

of the rhythmic contraction of the hearts' chambers as outlined and demonstrated by Gaskell seems in so far as any practical use of them being made, had lain dormant for a number of years, and it has only been within a comparatively recent period that other investigators, profiting by the work of Gaskell have carried this work forward and perfected it to such an extent that at the present time we are in possession of facts relating to the causes of the rhythmic contractions of the hearts' chambers that are of fundamental importance to a correct knowledge of cardiac physiology.

From our study of the embryology and comparative anatomy of the heart we know that it originally consisted of two straight tubes which later fused into one, and in its further process of development became twisted on itself in such a manner that the inlet and outlet became approximated, and further altered by division into its ultimate chambers and eventually at full development having no semblance to the original. Notwithstanding these various changes certain strands of the primitive tube remain, some of which have been located and studied during recent years. The knowledge of which has added greatly to a better understanding of cardiac physiology.

In 1907, Keith and Flack while studying the auricular musculature found what they regarded as a remnant of the original sinus tissue. This they observed lies at the junction of the superior vena cava and right auricle, and consists of an artery surrounded by fibrous tissue in which is an irregular mesh work of peculiar slender muscle fibres, which are transversely situated. The muscle fibres are in direct continuity with the auricular muscle fibres.

Nerve cells and fibres connecting with the trunks of the vagus and sympathetic were also found to be present.

In 1902 Kent gave an account of the muscular connection between the auricle and ventricle and the following year, His Jr. described a special bundle of muscle fibres connecting auricle and ventricle.

Other investigators confirmed these observations, but Tawara was the first to furnish us with a detailed and comprehensive account of the anatomy and histology of these important structures.

From Kent's description of the junctional tissues we learn that they can be traced from their origin in the auricle to their termination in the ventricle without a break in their continuity. They begin in the auricle in close proximity to the coronary sinus and the base

of the auricular septum where the auricular node is found. The bundle proper begins at this point and runs forward to the left until it reaches the right side of the ventricular septum where it divides into a right and left branch, the left perforating the septum, entering the left ventricle passing downward beneath the endocardium, being like its fellow of the opposite side distributed to its respective papillary muscles, where they commence their arborizations. These arborizations are directly continuous with the extensive subendothelial network of Purkinje's fibers, which are found distributed throughout the interior of both ventricles. By means of this network direct communication is established with the cardiac musculature.

Since these facts have been thoroughly established the clinical study of cardiac disorders has made marked progress, and as a result many of our old ideas have undergone a much needed revision.

It has been established by experiment and quite universally agreed upon that the origin of the heart beat is in the sino-auricular node described by Keith and Flack, it being situated at the junction of the superior vena cava and the right auricle, from this the contraction wave progresses to the auriculoventricular node then over the auriculoventricular bundle, thence over the right and left branches of the bundle, continuing by means of their respective arborizations and network of Purkinje, finally reaching the ventricular musculature over the transitional fibers.

This mechanism which conducts the impulses controlling the rhythmic and orderly action of the heart is sometimes designated as the transitional tissues, and starting with the sino-auricular node, are as follows:

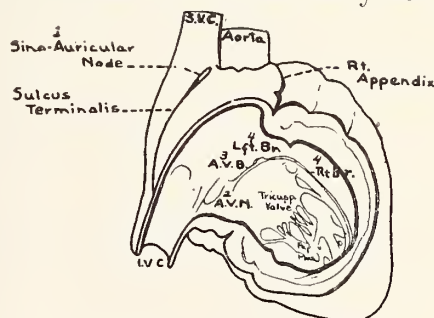
1. Sino-auricular node.
2. Auriculoventricular node.
3. Auriculoventricular bundle.
4. Right and left branches.
5. Arborizations and network of Purkinje.
6. The transitional fibres.

The accompanying diagram which is a modification from Lewis, will give an idea of the approximate location of these various transitional or junctional tissues.

The sino-auricular node where the impulses which govern the rhythmic contractions are built up, has been aptly called the "pace maker," this being governed by its connections with the cardiac vagus and sympathetic nerves. These two nerves acting in conjunction exert a governing influence over the heart's action. Stimulation of the vagus slows or stops the heart,

while stimulation of the sympathetic accelerates it.

It will thus be observed that the normal rhythmic action of the heart may be modified



1. Sino-Auricular Node.
2. Auriculo-Ventricular Node
3. Bundle Proper.
4. Right and Left Branches of the Bundle.
5. Arborizations and Network of Purkinje.
6. Transitional Fibres Between Network and Ventricular Substance.

FIG. 1 JUNCTIONAL TISSUES

by anything which modifies the normal activity of the cardiac vagus or sympathetic nerves. It is also apparent that if there is a functional or organic disturbance of the junctional tissues of the heart that an abnormal cardiac rhythm may develop.

Our lack of knowledge regarding the physiology of the cardiac mechanism has heretofore greatly handicapped us in arriving at a satisfactory diagnosis and classification of cardiac disorders, but since this has been established the progress along these lines has been most marked. We now know that the importance of a cardiac lesion does not depend so much upon the presence or absence of a valve lesion, but rather upon the myocardial reserve power, which can be quite accurately determined by the instruments of precision which we are now so fortunate to have access to.

The introduction of the polygraph by Mackenzie and the development of the electrocardiograph—which was made possible by the use of the Einthoven string galvanometer—the field of cardiac pathology has been revolutionized. By means of these instruments, the determination of myocardial efficiency has been greatly simplified, and it is my purpose at this time to call attention to a few of the many practical uses of the polygraph.

There are a number of very good polygraphs but the one which in my experience has proven the most satisfactory is the Mackenzie ink polygraph. This instrument is simple in its construction, and can be used by any intelligent person who will exercise care in its adjust-



ment and operation. It records simultaneously arterial and venous tracings, with the time in fifths of a second. One of the great advantages of this instrument is that we can secure tracings of any length, making it possible to record even infrequent arrhythmias.

As early as 1867 Potain obtained simultaneous arterial and venous tracings and his interpretation of the same was surprisingly accurate.

Since this time numerous contributions on the subject have appeared, but it remained for Mackenzie through his illuminating papers which appeared in 1893 and subsequent years to give to us a practical insight into the interpretation of the simultaneous tracings obtained by means of the polygraph.

The radial and jugulo-carotid tracings are the ones most frequently utilized. From the former we get valuable and accurate information regarding the workings of the ventricle, and from the latter concerning the auricle.

Much can be learned from the radiogram, but when accompanied by a jugulo-carotid tracing, much more valuable information is available.

In order to arrive at a proper interpretation of a tracing it is necessary to know the rate of the pulse and this can be accurately determined from the tracing, provided the time marker has indicated the time. Usually the time is indicated in fifths of a second and is illustrated in the accompanying tracings by the upper notched line. In order to ascertain the pulse rate, use a compass to measure five-fifths or one second, continue this until six such intervals are included between the ends of the compass; then take this measured distance, which represents six seconds, or one-tenth of a minute, down to the radial curve and count the full beats and fraction, if there be any, that is included between the ends of the compass and multiply this number by ten. For example: if the space includes seven and one-fifth radial curves, the pulse rate is 72 per minute.

In the case of jugulo-carotid tracings the curve is more complex than that of the radial, and for an accurate interpretation must be carefully studied in conjunction with the radial and time curves. The normal jugulo-carotid curve presents three principal curves designated as positive waves each of which is followed by a negative wave. For convenience of description, the positive waves have been designated a, c and v, all of which may be identified by measurements taken from the radial tracing.

The c wave in the jugulo-carotid tracing is

occasioned by the impact of the carotid pulse and it is recognized by its constant relationship in time to the radial.

It is considered that it takes about one-tenth of a second for the pulse wave to travel to the radial, hence we expect to find the c wave occurring one-tenth of a second in advance of the beginning of the up-stroke of the radial.

The wave preceding the c wave is produced by a systole of the auricle and has been designated the a wave, and in the normal condition occurs one-fifth of a second before the beginning of the c wave.

The third or v wave occurs after the c wave and has been demonstrated to be of ventricular origin. There are, however, probably some other factors which in a minor measure contribute to its origin. In time this wave is found to have a constant and definite relationship to the dicrotic notch, its beginning being one-tenth second in advance of the bottom of the dicrotic notch, or its apex corresponds exactly with the bottom of the dicrotic notch.

In order to make clear the method of determination of the pulse rate and the positive a, c and v waves of the jugulo-carotid tracing the accompanying normal polygram taken with a Mackenzie polygraph is introduced.

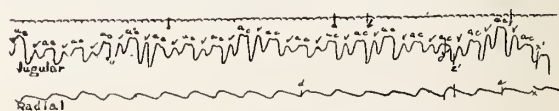


FIG 2. NORMAL POLYGRAM

The upper notched line indicates the time, each notch representing one-fifth of a second, the space a-b representing five-fifths or one second, while the space c-b represents six such spaces or six seconds, or one-tenth of a minute; the space c-b, when brought down against the radial curve is represented by the space d-e and is found to include approximately seven and one-fifth ventricular cycles which have occurred during a period of one-tenth of a minute or at the rate of seventy-two per minute.

In order to locate the positive waves in the jugulo-carotid tracing it is necessary that both the radial and jugulo-carotid tracings be accompanied by ordinates, which in this figure are indicated by x' in the jugulo-carotid and x in the radial. These are obtained by stopping the revolving cylinder, and drawing the tracing pens vertically across their respective tracings. In making long tracings, these ordinates should be introduced at frequent intervals, thereby making it convenient to identify the waves in any part of the tracing.

The c wave is identified by measuring the



distance from the ordinate on the radial curve at  $x$  to the beginning of any up-stroke on the radial as  $y$ ; place this distance,  $x-y$ , against the time marker, beginning at 1, and add to this one-tenth second or one-half of one of the spaces, which gives us the distance 1-2; place this space on the jugulo-carotid curve, with one falling on the beginning of the  $c$  wave at  $y'$ . To locate the  $v$  wave, proceed in a similar manner from ordinate  $x$  on the radial curve and measure the distance to the bottom of any dicrotic notch as  $z$ . Place this distance  $x-z$  against the time marker, beginning at 1, and add one-tenth of a second, which is represented by the space 1-3, place this against the jugulo-carotid curve, so that 3 falls on the ordinate, marked  $x'$ , and we have the space  $x' z'$  with  $z'$  falling at the beginning of the positive  $v$  wave.

When the jugulo-carotid curve presents three definite positive waves, as in the accompanying figure, there will be no difficulty in locating the  $c$  or  $v$  waves by the means already outlined, and when a wave precedes the  $c$  wave by a distance of not more than that represented by 0.2 of a second, as in this polygram, it is known to be the first positive or  $a$  wave, and its upstroke represents the onset of auricular systole.

The presence or absence of these positive waves and their relationship to each other gives us very definite information regarding the condition of the myocardium.

The interpretation of polygraphic tracings has led to the development of a rational classification of cardiac disorders which is of great practical value. Lewis classifies seven forms of disorders, all of which may be recognized by means of polygraphic tracings. These are as follows:

1. Sinus arrhythmia.
2. Heart-block.
3. Premature contractions.
4. Paroxysmal tachycardia.
5. Auricular flutter.
6. Auricular fibrillation.
7. Alternation of the pulse.

In order that we may intelligently interpret our tracings representing these various phases of cardiac disorders, it is of fundamental and primary importance that we keep clearly in our minds the physiology of the cardiac mechanism, which is responsible for the normal heart rhythm. In the first place, we must bear in mind that the "pace-maker," or sino-auricular node, is the distributing point from which the impulses start and from which they spread through the auricle and ventricle by means of

the transitional or junctional tissues. While the "pace-maker" originates the wave of contraction, it is in turn influenced by the vagus and sympathetic nerves. Consequently alteration in the function of these nerves or of the "pace-maker" or any of the transitional tissues may be responsible for the deviation from the normal cardiac rhythm which we are able to detect in the polygram.

We will now briefly consider each of these seven classes of cardiac disorders, illustrating each by a polygraphic tracing.

#### SINUS ARRHYTHMIA.

Sinus arrhythmias are irregularities of the heart produced by interferences with the rhythmic impulses at the seat of discharge. *Lewis*.

These arrhythmias are not infrequent, being most common during the first decade of life and are usually easily recognized in the radial curve by the gradual waxing and waning of the pulse rate which is quite frequently coincidental with the respiratory movements, and is characterized by one or more comparatively long pauses during the one of the phases of respiration.

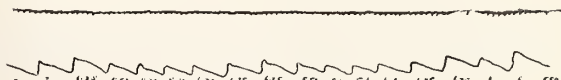


FIG 3 SINUS ARRHYTHMIA

Besides these sinus irregularities there are others which have no relationship to respiratory movements. These Lewis describes under three main heads as follows:

1. Sudden and prolonged cessation of the whole heart beat, a very rare condition.
2. Phasic variation of pulse rate in which a retardation and subsequent gradual acceleration of the whole heart occurs; this is usually associated with heavy doses of the digitalis group, and is a relatively rare form of irregularity.
3. An irregularity of the whole heart of mild degree in which shorter and longer pauses are mixed indiscriminately. It is not infrequent and is usually combined with a general reduction of pulse rate. It is especially frequent in patients with rheumatic heart disease and who are under the influence of digitalis; it is accentuated when the heart slows after it has quickened in response to exercise.

These, as well as the respiratory irregularities, are due to alteration in vagal tone and are not of serious import and require no special treatment.

## HEART-BLOCK.

An abnormal heart mechanism in which there is a delay in or absence of response of the ventricle to auricular impulses. *Lewis*.

This disorder is evidenced in the arteriogram by a progressively developing bradycardia, which we are frequently unable to detect without a polygraphic tracing of both the arterial and venous pulse.

There are several different grades of heart-block, and in the simplest form there may be simply a prolongation of the time between auricular and ventricular systole, the AS-VS interval, as it has been called. Normally this period occupies 0.2 seconds or less. In such cases there is some disturbance in the junctional tissues leading from the "pace-maker" to the ventricular musculature resulting in a delay on the part of the ventricle to respond to the auricular contraction thereby reducing the rate of ventricular contractions. In these cases the ventricle responds regularly and normally to the auricular contraction, so that the normal rhythm is not disturbed and the only way we can detect such a condition is by the accompanying venous tracing from which we discover the abnormally long AS-VS interval.

The AS-VS interval in the venous tracing is determined by the locating of the positive a and c waves and if the time between the beginning of a and that of c is longer than 0.2 seconds, a diagnosis of the simplest form of heart-block may be safely made.

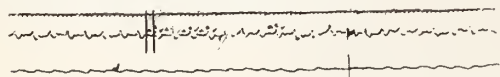


FIG. 4. HEART BLOCK PROLONGATION OF THE AS-VS INTERVAL.

A higher degree of heart-block exists where there is an occasional failure on the part of the ventricle to respond to the auricular impulse; under such circumstances we have what has been designated "dropped beats." This is usually associated with a variation in the AS-VS intervals. From these isolated irregularly occurring "dropped beats" there is a gradual progression, until definite ratios are established between auricular and ventricular rates such as two of the auricle to one of the ventricle. In such a case, we have 2 to 1 heart-block; 3 to 1 and 4 to 1 ratios, in which each third or fourth auricular impulse alone yields to ventricular contraction. These bradycardias constitute what is known as partial heart-block.

The accompanying polygram, Fig. 4, illustrates a condition of partial heart block, in which there is two beats of the auricle to one of the ventricle, and which is designated as

a 2:1 heart-block. The ventricular rate is 36 per minute and the auricular 72.



FIG. 5. 2:1 HEART BLOCK

In complete heart-block we have a condition in which the auricle and ventricle act independently, each establishing a rhythm of its own. In such cases the auricle beats about 72 times per minute while the ventricle establishes a much slower one, generally about 30 per minute; while both are regular, they are quite independent of each other, as polygraphic tracings show.

Heart-block may occur at any age, but is most common during the period of life when diseases which produce degenerative changes in the myocardium are most prevalent. Chorea, rheumatic fever, syphilis and other diseases prove to produce myocardial degeneration all may be etiological factors in the production of heart-block.

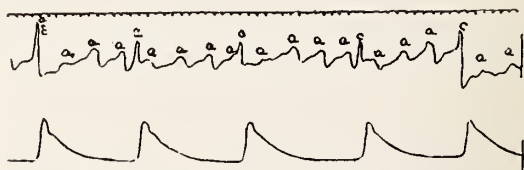


FIG. 6. COMPLETE HEART BLOCK MACKENZIE

The administration of digitates to patients suffering from myocardial degenerations occasionally develops a latent heart-block. Experimentally it may be produced by stimulation of the vagus. The lesions responsible for the production of heart-block are to be found in the main bundle or its attachments to the auricle.

## PREMATURE CONTRACTIONS.

Responses of the heart to new and isolated impulses formed in the musculature; contractions which occur before the anticipated time, and which consequently disturb the normal order of the heart's mechanism. *Lewis*.

The impulses from which premature contractions start may originate in the auricle, the ventricle or the connecting tissues. In this connection we will only deal with the two chief classes, the auricular and ventricular forms.

In order to comprehend the nature of premature ventricular contractions we must have in mind two fundamental facts, first that the ventricle is refractory during its systolic phase, it will not respond to stimuli reaching it during this period, and second that it is only during its diastolic phase that it will respond.



In cases of premature ventricular contractions the ventricle responds to a pathological impulse which has arisen in the ventricle and the consequent premature contraction arising therefrom appears prematurely, thereby disturbing the normal rhythm; the ventricle then rests until a rhythmic impulse reaches it from the auricle. Premature ventricular contractions may be detected in the radial curve by the fact that the periods of disturbance produced by them are exactly equivalent to two normal beats. The length of the pause following the premature ventricular contraction is long, the ventricle is resting, and the resulting pause compensates for the preceding short pause, and is known as the "compensatory pause."

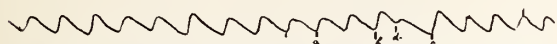


FIG. 7. PREMATURE VENTRICULAR CONTRACTIONS

In the case of premature auricular contractions the normal rhythm is disturbed and the condition may be recognized by the fact that the period of disturbance is less than two normal beats; the pause is not compensatory.

Fig. 7 is an illustration of a premature ventricular contraction. A careful analysis of this case will demonstrate that while b-d is considerably shorter than the normal curve e-a, that the period of disturbance, b-c, is exactly equivalent to two normal beats, a-b; the curve d-c being compensatory, all of which demonstrates the existence of a premature ventricular contraction.

In the case of premature auricular contractions the normal rhythm is disturbed and the condition may be recognized by the fact that the period of disturbance is less than two normal beats; the pause is not compensatory.

Premature contractions occur most frequently from the fifth to seventh decade and may occur at any age, but seem to be more frequent as age advances. We not infrequently observe patients who exhibit premature contractions in whom no other cardiac disturbance can be found. A careful study of all cases, however, will elicit the fact that premature contractions are more common in patients who have other demonstrable cardiac lesions, especially cases of aortic incompetency and mitral stenosis.

There are numerous factors which enter into the causation of premature contractions. We frequently find them associated with arterio

sclerosis, and digestive disorders of various sorts. The condition is rarely associated with tachycardia, and when present acceleration of pulse by rise in temperature or exercise will often cause it to disappear.

Patients exhibiting premature contractions are frequently unduly alarmed and should be assured that these arrhythmias in themselves are not of serious import. We must have in mind, however, that our prognosis must depend largely on the prognosis of the associated conditions, recognizing that a premature beat is evidence of a cardiac defect. It may be the forerunner of a more serious cardiac disturbance and may later lead to more serious irregularities, such as paroxysmal tachycardia, auricular flutter and fibrillation, all of which are the result of ectopic impulse formation.

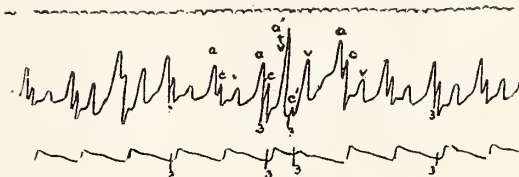


FIG. 8. PREMATURE AURICULAR SYSTOLE. MCKENZIE

#### PAROXYSMAL TACHYCARDIA

Is a condition in which from time to time the normal mechanism is abruptly submerged in rapid contractions of the muscle in response to a series of new, rhythmic and pathological impulses varying in rate from 110 to 200 per minute. *Lewis*.

During the interval between the attacks of tachycardia, which may be from a few hours to years, the heart is in an apparently healthy condition, both polygraph and electrocardiograph giving normal tracings. In some cases the attacks become so frequent and last so long that the myocardial insufficiency results. Just what incites these attacks is not known, but it has been demonstrated that the new rhythm established is excited by some other center than the sino-auricular node, and that it is usually located within the auricle. In the majority of cases the patient gives no history of previous illness to which the disease could be traced. Rheumatic fever is the most common disease to which the condition might be attributed; in some cases syphilis undoubtedly is an etio-

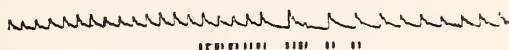


FIG. 9. SIMPLE PAROXYSMAL TACHYCARDIA. LEWIS

logical factor. In one of my cases antisyphilitic treatment abolished the paroxysms.



## AURICULAR FLUTTER.

Auricular flutter may be arbitrarily defined as a condition in which the normal beats of the auricle are submerged by contractions of this chamber in response to a series of new rhythmic and pathological impulses, varying in rate from 200 to 350 per minute. *Lewis.*

This is a condition which so closely resembles simple paroxysmal tachycardia that it is not always possible to draw a sharp line of distinction between the two; however, in cases where there is a considerable difference in the rates the two tracings do not resemble each other sufficiently to make the distinction difficult. The most notable difference in the two tracings is the presence of heartblock, usually of the 2 to 1 variety, the auricles beating twice to each beat of the ventricle, the auricular rate being from 230 to 320 per minute, the ventricular rate 115 to 160. The impulses which initiate this unusual rhythm probably have their origin in the auricle at some distance from the sino-auricular node.

Flutter is a rare form of cardiac arrhythmia, and its etiology is somewhat obscure. It occurs most frequently between the ages of 50 and 70 and bears no definite relationship to infectious diseases. In a few cases rheumatic fever and syphilis seem to have had some bearing. It is not infrequently associated with degenerative changes in the cardio-vascular system.

The prognosis of this form of cardiac disorder should be based on the strength of the heart muscle. The condition has been known to last for several years.

Many cases of auricular flutter, even of long standing, respond quite readily to digitalis medication.

Lewis states that the ventricular rate can always be reduced by giving digitalis or strophanthus in full doses, and may be maintained at the reduced rate so long as the treatment is continued. He has also found that if having obtained this reduction, the dosage be increased, the flutter ceases and fibrillation takes its place.

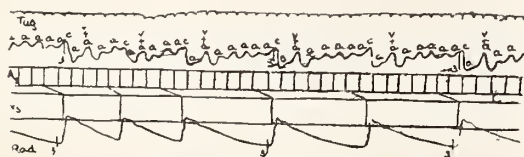


FIG. 10. AURICULAR FLUTTER. HACKETT

If now the remedy is withdrawn, the fibrillation vanishes in most cases and the normal rhythm is immediately resumed.

## AURICULAR FIBRILLATION.

Auricular fibrillation is a condition in which normal impulse formation in the auricle is replaced by stimulus production at multiple auricular foci. Co-ordinate contraction in the auricle is lost; the normal and regular impulses transmitted to the ventricle are absent, while rapid and haphazard impulses produced in the auricle take their place and produce gross irregularity of the ventricular action. *Lewis.*

In this condition the auricles apparently cease to undergo a normal systolic contraction and are observed in a state of diastole. Close observation, however, will reveal the fact that there are small irregular contractions throughout the whole auricular musculature. This extremely unsettled condition of the auricle probably excites haphazard contractions in the ventricle, resulting in the grossly irregular polygram which characterizes fibrillation.

Lewis divides these cases into two groups, the rheumatic and non-rheumatic. In the rheumatic group the cases are most frequent between 20 and 50, and in the non-rheumatic between 60 and 70. It is much more common in men than in women.

As regards the morbid anatomy of the auricular fibrillation, valve lesions, hypertrophy or dilatation, and myocardial degenerations are found in a majority of instances.

The prognosis is always grave; it is an evidence of a serious myocardial defect; the more rapid the pulse the more serious the condition.

Fortunately, quite a large percentage of these cases yield to proper medication. In cases where the pulse is over 100 when the patient is at rest, digitalis is indicated.

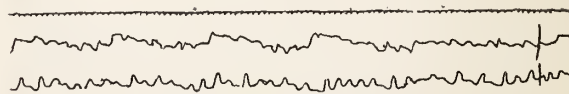


FIG. 11. AURICULAE FIBRILLATION

## ALTERNATION OF THE PULSE.

A condition in which the left ventricle while beating regularly, expels larger and smaller quantities of blood at alternate contractions. *Lewis.*

This form of cardiac disorder is characterized by a tracing in which every other beat is small and every other one large. The ventricles beat regularly and the cause for this anomaly is still unexplained.

It has been observed to occur in cases with rapid pulse, especially in those with paroxysmal

tachycardia. It is also found in cases where the heart rate is not increased, especially in cases of angina pectoris and high blood pressure.

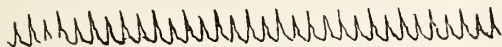


FIG. 12. ALTERNATION OF THE PULSE LEWIS

Its presence indicates a myocardium taxed to its fullest capacity.

The prognosis in cases of Alternation of the Pulse should always be guarded, sudden death is not uncommon.

The treatment in such cases is obvious. The overworked myocardium requires rest and measures to this end should be instituted.

## TONSILLECTOMY IN ADULTS.

JOHN J. MOFFETT, M.D.  
PORT HURON, MICH.

We are beginning to view certain of the general diseases in a new light following the investigations of Billings, Rosenow, et al, and the rapidly accumulating data show conclusively that many of these conditions are the direct result of septic emboli derived from foci of infection chiefly in the mouth, throat and nose.

The role of the tonsil in harboring and exporting to the system virulent cultures of pathologic bacteria, together with their toxins, is only beginning to be appreciated by the profession.

Of the many organisms involved, the streptococcus appears to be the most important. (1)-(7). According to the environment that obtains at the site of its residence it may be so altered or transmuted as to assume a specific affinity for certain tissues quite remote from the original focus and be capable of producing therein very damaging consequences. It is quite probable that the tonsils in turn receive a large proportion of their infections from contaminated mouths. It has been an almost invariable personal observation to find diseased tonsils in every instance where tooth decay and pyorrhea exist.

Among some of the local and general conditions in which tonsillectomy may be advised are to be mentioned the following:

Cervical adenitis; (6) oft-repeated attacks of follicular tonsillitis; if one attack of quinsy has occurred; certain types of middle ear disease with or without chronic discharge; greatly enlarged tonsils; foul breath associated with caseous material in the tonsil crypts; new growths either benign or malignant; chorea

(2); acute or chronic metastatic ("rheumatic") arthritis (3); valvular heart disease; ulcer of the stomach (4); goiter (3); certain skin eruptions such as herpes zoster, (5) urticaria and erythema multiforme; after certain diseases wherein the patient through the medium of the tonsil may act as a "carrier;" diphtheria, Vincent's angina, etc.

It is then mainly in the cause of prophylaxis and as a "fundamental principle" in the treatment of already existing diseases now known to originate in septic foci, that we find the paramount indications for complete removal of all pathologic tonsils.

As to just what constitutes a diseased tonsil or the procedure utilized to arrive at such a conclusion, little of a truly definite nature has been formulated. Excluding new growths and the acute tonsillar inflammations, I am accustomed to make use of the following factors in arriving at an opinion:

1. Size. I consider all greatly enlarged tonsils pathologic, either in children or adults. Cervical adenitis will nearly always be plainly discernible in these cases. In the small throats of children they might well be so considered from purely mechanical reasons, as pressure on the Eustachian tubes, interference with phonation, etc. Small tonsils cannot be classed as diseased from a consideration of their size alone. Mere stubs of tonsils may cloak a menacing nidus of infection.

2. Enlargement or abscess formation in the lymph glands draining the tonsillar region.

3. History of oft-repeated attacks of follicular tonsillitis.

4. History of one attack of quinsy. Here it is doubtful if the abscess, that forms ever entirely empties itself or is completely absorbed spontaneously unless very thorough drainage is secured at the time of the attack. This is often accomplished in text-books but not as frequently in actual practice.

5. The presence of cheesy kernels in the tonsil crypts. Anyone who is skeptical as to the septic nature of these bodies or who would like to demonstrate in one specimen all shapes and sizes of bacteria now known, can satisfy himself by crushing one on a glass slide staining it a few moments in methylene-blue and examining under an oil-immersion lens. I have looked at a good many specimens stained in this manner and have never yet failed to find streptococci. In point of odor these deposits are only rivaled by ozena and this feature probably accounts for many instances of foul breath.

6. Ability to express pus from either the



tonsil itself or the peritonsillar space. This constitutes an absolute indication for tonsillectomy.

7. Color. A dusky red color limited to the mucous membrane of the tonsil usually means chronic infection. Often it will be merely a narrow, horse-shoe shaped band of color limited to the margins of the pillars, arching up over the tonsil and presenting decided contrast to the paler contiguous pharyngeal mucosa.

It is now conceded that the tonsils should be removed *in toto* with the capsule intact if they are to be removed at all. Retained stumps after tonsillotomy defeat the purpose for which the operation was done, the resulting scar tissue sealing permanently the openings of the crypts and confining infectious material under tension beneath the wound.

The same pre-operative attention should be given the patient as for any other operation of equal magnitude, due care being exercised to recognize and consider any important contraindications that may exist.

The anesthetic used depends on the mental and physical condition of the patient, the skill of the operator and the method of removal to be employed. Local anesthesia with novocain and adrenalin by the infiltration method is the safest one yet devised for tonsillectomy. The bleeding is decidedly less than with either "gas" or ether; the patient is in the upright position therefore making it easier to secure a good light and do the operation. He is conscious and can co-operate in the work with mutual advantage. It avoids the danger of a general anesthetic and the post-anesthetic nausea; the peritonsillar structures are rendered insensitive so that after the tonsils are out, any bleeding points may be seized with a hemostat or tied without pain or flinching. It saves time, the average case requiring about ten minutes in all, including the infiltration and the final inspection of the fossae. The method has a wide range of applicability as it can be used with but few exceptions in all persons above 16 years of age.

The operative technic employed must be one that assures complete enucleation of the tonsil with its capsule intact and a minimum amount of damage to the important peritonsillar structures. With this operative ideal uppermost the choice of instruments becomes largely nominal. As a rule the sharp instruments and the forked tonsillotomes are to be avoided as tending to increased bleeding in the former instance and to both hemorrhage and an incomplete operation in the latter. Personally I use a grasping forceps, a curved, blunt-pointed, semi-sharp knife and two pairs of heavy wire snares one

for each tonsil and find them sufficient for all cases. Both sides are infiltrated with 0.5 per cent. novocain and adrenalin 1 to 50,000, at a single procedure so that one may progress with the operation without unnecessary interruption. This is the most important single step in the technic. Upon the skill of its application usually depends the success or failure of the operation. When properly given, pain is entirely abolished or is so slight that it in no way prevents the completion of the work.

As a result of the properly performed tonsillectomy we can assure complete relief from local symptoms and the amelioration or cure of systemic afflictions that have originated from infectious foci in the tonsils.

In conclusion I would emphasize the following points:

1. The importance of the tonsils as a potent etiologic factor in both local and systemic diseases.
2. That facts are coming to displace empiricism as an indication for tonsillectomy.
3. That a more concerted effort should be made to establish a specific test for recognizing diseased tonsils.
4. That tonsillectomy should supercede tonsillotomy.
5. The marked safety and other advantages of local anesthesia, and
6. The favorable results following tonsillectomy when skillfully performed under the proper indications.

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#### REPORT OF A CASE OF SARCOMA OF THE THYROID.

HENRY J. VANDENBERG, M.D.  
GRAND RAPIDS, MICH.

The patient, a woman of fifty-eight, had had for eighteen or twenty years a small goitre that had caused no trouble. Five months ago her appetite



became poor and she began losing weight and strength. Two months ago the goitre commenced to enlarge and has continued to do so quite rapidly since then. It was neither painful nor tender.

*S. P.*—Her body is poorly nourished and cachectic; the mucous membranes are pale; the skin is very dry and wrinkled; the hair of the scalp is rather dry and thin; the eye-brows and lashes are thin; there is an absence of axillary hair and the pubic hair is thin. This has become so the past half year. Her pulse ranges between fifty and seventy; temperature is slightly subnormal. No edema of the face; slight edema over the sacrum. The tumor involves the right lobe and possibly the isthmus—the left lobe is apparently free from the disease. The overlying skin is not attached. The growth is movable, but hard and stiff. It is irregular and extends upward farther than most benign tumors of the thyroid. There is one enlarged gland of the

enlarge very rapidly, soon going over to the opposite side and gradually producing pressure upon the trachea and oesophagus. This was



posterior cervical chain; no others could be made out. Slight hoarseness which commenced a few days ago. Slight bronchial breathing heard over the entire lung area, probably caused by pressure of the tumor upon the trachea. The pleura is apparently not involved. Examination of the osseous system shows slight tenderness over the left tibia. Physical examination otherwise negative. Carcinoma was diagnosed, and operation advised and accepted.

Except that it was somewhat adherent to the overlying muscle the gland was free and was easily removed. Pathological examination by Dr. Warthin of Ann Arbor revealed "spindle cell sarcoma with numerous giant cells and areas of necrosis. Evidently a very malignant form with rapid growth."

Two weeks after the operation a rather sudden enlargement of the neck appeared which supposedly was due to a hemorrhage. This, however, did not disappear but continued to



evidenced by coughing, choking, difficult breathing, hoarseness and difficult swallowing. It soon became hard to swallow anything but soft



food, later liquids only were taken, the last week nothing at all. She lost very rapidly in weight and practically starved to death. Vigorous X-ray treatments were begun soon after

operation but apparently had no retarding influence upon the growth.

Permission for autopsy could not be obtained. However during her illness no signs of any metastasis could be made out beyond the slight tenderness of the left tibia. Metastasis there was unlikely since bone metastases following malignant conditions of the thyroid usually occur in the skull, lower mandible, clavicle, scapula, sternum or upper ribs; in other words, bones in the neighborhood of the thyroid. This latter phenomenon may substantiate Handley's theory that bone metastases occur by direct extension instead of through the circulation as is held by nearly all other observers.

On account of the patient's age carcinoma was diagnosed, since sarcoma as a rule usually occurs earlier and is much less common. The latter is rare, only about one-hundred cases hav-

ing been reported, and of this number only a few in this country. This neoplasm occurred in an old goitrous gland as is the rule. Rapid increase in size in a goitre of long standing should always arouse suspicion of malignancy. Sarcomas usually grow rapidly and carcinomas may; however, growth of the latter may extend over a period of many years. Almost a complete absence of pain as in this case is rather unusual. The thyro-prævia signs were very striking and interesting since the left lobe seemed intact.

The accompanying photograph shows the wrinkled skin and tumefaction, the latter differing from that of non-malignant goitres in its irregular projection forward and extension farther upward, the latter feature not being shown here.

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*AMONG your New Year's  
Resolution prominently ex-  
hibit your resolve to attend every  
meeting of your County Society;  
to participate in its activities and  
to devote a definite amount of time  
each day to systematic reading ✻*

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# TRANSACTIONS

## OF THE

### Clinical Society of the University of Michigan

Stated Meeting, October 11, 1916

The President, CARL D. CAMP, M.D., in the Chair  
Reported by REUBEN PETERSON, M.D., Secretary

#### DEMONSTRATION OF A CASE OF POLYSEROSITIS.

NELLIS B. FOSTER, M.D.

(From the Clinic of Internal Medicine, University Hospital,  
Ann Arbor, Michigan).

The patient represents a condition or a group of conditions which is very interesting in internal medicine because I don't believe we understand them very well. He came into the Clinic the latter part of August or early September complaining of those symptoms that would be due to an accumulation of fluid in the pleural cavities. He had shortness of breath, progressive weakness and some cyanosis. On examination at that time there was edema of the extremities and a good deal of fluid in one chest, a little fluid in his abdomen and some fluid in the other chest. For diagnostic purposes and also for the relief of the patient, fluid was removed from the right chest. The fluid at that time was a typical pleural effusion, the fluid being clear and not particularly remarkable in its cellular constituents. At a later period his abdomen was tapped and chyloform fluid was recovered. After tapping the abdomen the fluid rather rapidly accumulated in the abdomen and both chests and these in turn were tapped. All of them now contain chyloform fluid.

So we have a condition which we have watched develop under our eyes. The examination in all of the particulars is relatively negative. He has no indication of cardiac disease, or renal disease. I mention these diseases particularly because both are associated with peculiar forms of inflammation of the serous surfaces. There isn't a great deal to see in the man's condition. His color does not come out particularly well in this light. He has a pink cyanosis in the daylight. There is a good hemoglobin color

but there is some cyanosis. The fluid last taken from the chest measured 1,400 cubic centimeters. The amount taken from the abdomen was much greater. One can still very quickly decide that there is plenty of fluid in the chest. He has marked edema of the extremities.

The condition in short is that which is best described as polyserositis. Polyserositis so far as its etiologic factors are known is dependent in a great majority of cases upon a low grade tuberculous infection. The differentiation has to be made so far as the etiology goes between tuberculosis, typhoid and chronic colon infections. Those are the only known etiologic factors. Some cases have been attributed to influenza, but it is now believed to be a secondary invader. The question arises as to what other conditions can particularly resemble this. At once we come across a group of diseases which are of a great deal of interest, though not profitable to discuss. They have been styled by Curschmann as iced liver, by Pick as pseudocirrhosis with adherent pericardium, by Concato as diffuse inflammation of all serous surfaces. The characteristic of these conditions is that there is an inflammation of the serous surfaces associated primarily with an adherent pericardium. Evidently an adherent pericardium is the starting point of the process. In the same group Kelly of Philadelphia placed some years ago polyserositis. It is probably an infection of low grade virulence.

We have attempted in this man to demonstrate that this is a tuberculous infection. Fluid from the cavities has been injected into guinea pigs and the pigs have lived a sufficient time and have been autopsied but have not shown tuberculosis. So in this case we are dealing with one of the exceptions. I hope somebody will come to my rescue and give me some suggestion

which will make the case clearer. It is an interesting case, rather uncommon, and to everyone rather obscure.

#### DISCUSSION.

DR. JAMES G. VAN ZWALUWENBURG: This case was early referred to me for the purpose of excluding carcinoma of the gastrointestinal tract. At that time (before this long period had elapsed) I think carcinoma was correctly taken into consideration. The only evidence I found was that of increased fluid in the abdomen.

DR. D. MURRAY COWIE: I should like to ask Dr. Foster what the laboratory examination of the fluid showed. These cases of polyserositis are entirely different from some monoserous effusions which are not infrequently found. In the latter group of cases we may get true chylous fluid in the cavities and cases looking exactly like polyserositis do occur in which true chylous fluid is found, an association, for example, of chylothorax and chylous ascites or of chylous ascites and chylocele due to rupture of the chyle vessels or to injury to the thoracic duct. Such cases, however, are usually confined to the abdomen and scrotum or to the thorax.

The differentiation of these fluids is not difficult. I should like to know if any fat estimation of this fluid was made. In chyloform fluids there may be a certain percentage of fat present. The amount, of course, is not as great as it is in a case of true chylous effusion, and the fat content cannot be influenced by the character of the food fed as it sometimes can be in those effusions due to rupture of a lacteal. The fat in chyloform ascites or serositis cases comes from cell degeneration.

DR. HARRY D. MALEJAN: Was an examination of the blood made as to filaria bancrofti? I understand that in many cases of chyluria, filaria bancrofti are found in the blood at night. We had a case last year in the Surgical Clinic where a man was passing chyle in the urine. Examination showed a normal bladder. Urine coming from both kidneys contained chyle. We were unable to find the organism. I was wondering if these two conditions might not be associated and whether filaria bancrofti might not be a causative factor in these cases of polyserositis where chyloform fluid is found in the serous cavities.

DR. FOSTER: The question that Dr. Cowie brought up with regard to the character of the fluid may be answered by saying that it is a true chylous fluid in that there is a "bubby coat" on standing. It is turbid but it does clear up on adding ether, so there is a lipid substance present. The chemical examination of the fluid has not been undertaken.

DR. COWIE: I would like to ask about the blood count.

DR. FOSTER: There was a slight secondary anemia, nothing special in the lymphocyte count, transitional 9 per cent.

DR. COWIE: It is an interesting point in chylous ascites that you may get a leukemia. The majority of the lymphocytes come through the thoracic duct.

## DEMONSTRATION OF A CASE OF PAPULONECROTIC TUBERCULIDES.

JOSEPH A. ELLIOTT, M.D.

(From the Clinic of Dermatology and Syphilology, University Hospital, Ann Arbor, Michigan).

The case which I wish to present before the Society is not primarily one of interest to the dermatologist only, but to the orthopedist, roentgenologist, and the internist as well.

The patient entered the Orthopedic Department complaining of a swollen and painful knee, which had troubled her for the past seven or eight years. An X-ray picture was taken, and from the suggestive findings she was referred to the Department of Dermatology for examination as to the possibility of a luetic infection.

On examination there was found over the upper portion of the thorax, on the arms, back and thigh a few excoriated papules, which on first glance seemed to be of little importance, but on closer inspection it was noted that these lesions were follicular, surrounded by an inflammatory areola, while some showed a typical necrotic center. The lesions also were of various stages of development, from the small follicular lesion to the involuting necrotic papule. Over the arms, chest and back there were numerous small scars with a definite pitting in the center. Some of these scars showed a slight pigmentation around the periphery. Incidentally I may say that the pigmentation varies greatly with the type of individual, being more marked in brunettes. The right knee is swollen, has a slightly thickened capsule, is painful on pressure, and has limited motion. The glandular system is negative. The mucous membranes are clean, reflexes normal, and the Wassermann negative. The chest was examined by the Department of Internal Medicine, which reports slight dullness over the right apex, probably not pathologic.

As to the eruption over the body, one would probably consider at first glance a dermatitis factitia, which the lesions somewhat resemble, and which is not an uncommon finding in women of a nervous temperament. However, on closer inspection of the finer details of the eruption as previously noted, we are left with but one possible diagnosis, that is, a papulonecrotic tuberculide.

The papulonecrotic tuberculide was first noted by Hutchinson in 1879, and was classed along with lupus erythematosus. One year later Boeck presented the first accurate description of the lesions under the name of lupus ery-



thematosis disseminatus. Barthelemy described the condition in 1891 and called it folliclis, which term is still used by many authors. After that time various terms were employed such as acne varioliformis of Bronson, tuberculide of Darier, and papulonecrotic tuberculide of Hallopeau.

The eruption appears on the extremities as follicular papules which soon become pustular, and usually heal spontaneously within a short time, giving rise to small atrophic scars surrounded by a variable amount of pigment. Relapses and recurrences are not infrequent and the patient may not become free of the eruption for a long period of time.

It was thought for a time that these lesions resulted from circulating toxins in the blood, but more recently there has been a growing belief that the lesions contain active organisms. This belief has been substantiated by positive animal inoculations.

#### DISCUSSION.

DR. UDO J. WILE: Before taking up the discussion of the knee I should like to say just one word with regard to tuberculides and their relation to tuberculosis. The word tuberculide, if used in the same sense as the word syphilide, is a correct name. Unfortunately, however, the early belief that the tuberculides were toxic tuberculosis, or paratuberculosis, related to tuberculosis only through the dissemination of toxins, has led to an unfortunate misunderstanding about them. They are of more than passing interest to all departments of medicine. In the last four years we have been repeatedly able to determine early visceral tuberculosis, otherwise unsuspected, by the demonstration of tuberculides on the extremities. In children the pediatricians have gone much farther than the dermatologists and internists in that they have been able to demonstrate tubercle bacilli in such lesions and the consensus of opinion is that the appearance of tuberculides on the body of a child under one year means a miliary tuberculosis sooner or later.

In the adult it is rare to find serious tuberculosis with the tuberculides. Expressing it otherwise, it is rare in sanatoria where open tuberculosis is treated to find associated tuberculides. As a rule it would seem as though there were some sort of inverse ratio between the degree of visceral involvement and the presence of tuberculides on the skin except, as before mentioned, in the case of infants. We had one case here four years ago of a young female student of the University who entered the Hospital with typical tuberculides of the leg. The first examinations were negative. Subsequently she came down with a typical tuberculosis, the history being that her father and several members of her family had died of it. We have seen many cases of this disease in the Pediatric Department.

DR. JAMES G. VAN ZWALUWENBURG: I will show the lantern slides of these lesions. (Fig. 1.) The radiogram is very well represented here and shows a very peculiar picture. You will notice that on the

posterior surface of the external condyle there are two or three small punched out erosions. These are not associated with any marked calcification about the border or any marked periostitis above and they are not associated with any erosion of the joint cartilages on the bearing surfaces. Also the patella is practically normal. There is to be observed, however, a dark area extending all around the joint which represents the capsule, filled with more or less calcareous exudate.

Of course, we understand the limitations of the X-ray and we deprecate attempts to make a specific diagnosis on empirical findings. However, if we attempt to interpret these plates in terms of gross pathology we get into difficulties. Evidently there is here a low grade chronic inflammatory process sharply localized and associated with a calcareous exudate. Of the chronic inflammations there are only two common ones, tuberculosis and syphilis. I have never seen a tuberculous joint of this kind. We know that syphilis will occasionally attack the knee and sometimes the elbow, and present exactly similar findings. It was on such a basis that a diagnosis was made of "old chronic inflammation, probably lues." In face of the dermatologic findings, we still have to consider a dual infection, unless the other clinical factors are overwhelmingly against a luetic infection.

The precise pathology, if this is tuberculosis, is not at all clear because we so seldom see this form of tuberculosis. It scarcely conforms with tuberculous infarct of the heads of the bones in which the infection is almost invariably transmitted to the joint and the remaining articular cartilages suffer more or less severely. It certainly does not agree with the primary synovial tuberculosis of the joint. Of luetic bone lesions Dr. Wile can speak with greater authority than I, but I have always been given to understand and have assumed that these punched out sharply localized areas of erosion of the joints in lues are due to small gummata just beneath the articular surface. I may add that this is not at all the picture of a "Charcot" joint.

DR. NELLIS B. FOSTER: I don't believe I can add anything to the discussion which has not already been brought out. The conception that I had with regard to the pathology as evidenced in this X-ray picture is very much the conception which Dr. Van Zwaluwenburg has stated. I thought that pictures showing localized areas of osteoporosis were a great deal more apt to be lues than tuberculosis. Of course, as we study the two diseases more and more in comparison, it becomes increasingly evident that they are very much alike, particularly in the way that they attack bones, so I don't believe we can take any dogmatic position which would enable us to say from the gross pathology that it was either tuberculosis or lues, unless the lesion is one which is perfectly characteristic, and this is atypical.

DR. UDO J. WILE: I should like to call attention to the very great chronicity, the limitation of motion in this joint and the absolutely negative serologic findings in the case, which, with all due respect to the limitations of the serologic test, is almost positive in osteoporotic joints. The reaction here has been entirely negative.

DR. ELLIOTT: I had hoped that Dr. Washburne would be here to discuss the knee condition, inas-

much as the patient came to his department. The history is certainly against its being a luetic process, inasmuch as it came on gradually. The lameness began eight years ago and has gradually increased. A careful examination of the woman does not show any evidence whatever of lues and the serologic test is negative. From the findings we came to the conclusion that the knee also was a tuberculous process.

### A CASE OF SUPPURATIVE OTITIS MEDIA WITH COMPLETE THROMBOSIS OF THE LATERAL SINUS, SUPERIOR PETROSAL SINUS AND THE JUGULAR BULB WITH INVASION OF THE LABYRINTH.

R. BISHOP CANFIELD, M.D.

(From the Clinic of Otolaryngology, University Hospital, Ann Arbor, Michigan).

I wish to present a case of chronic suppurative otitis media in which a complete thrombosis of the lateral sinus, the superior petrosal sinus and the jugular bulb has taken place apparently without symptoms, and in which an invasion of the labyrinth very recently took place.

This patient has had a chronic suppurating ear since infancy almost without symptoms. About six weeks ago he suddenly experienced pain on the affected side which greatly increased, compelling him to take to his bed. Since then he has had dizzy attacks and has vomited. The attacks were not severe until about a week ago when his neck became stiff and a swelling appeared behind the ear. The night before he came under observation he developed a facial paralysis on the affected side. At that time in the Otologic Clinic, examination showed a partial right sided facial paralysis being more marked in the upper segments, although noticed throughout the entire right side of the face. He had a perceptive deafness which was practically complete. He could not hear a shout. The tests with the tuning forks were conclusive and the examination of the vestibular apparatus showed that it did not react to stimulation. He had a leucocytosis of 19,000, a swelling behind the right ear and a point of extreme tenderness over the emissary vein. He had a slight spontaneous nystagmus of one degree to both sides.

We had then to consider a chronic suppurative otitis media with subperiosteal abscess, possible thrombosis of the sigmoid sinus and an invasion of the labyrinth. The character of the last could not be definitely stated. The deafness might have been toxic, but the failure to elicit any response to the stimulation of the labyrinth was against that diagnosis and in

favor of a recent invasion of the labyrinth by the suppurative process in the ear. This was borne out by the attack of dizziness and vomiting. Our clinical diagnosis was chronic suppurative mastoid disease, possibly a sinus thrombosis and a suppurative infection of the labyrinth.

The operative findings included the discovery of a collection of pus under the periosteum, a sinus through the cortex about the level of the antrum, the presence of a foul smelling pus in the mastoid containing some cholesteatome, and the complete thrombosis of the superior petrosal and lateral sinuses. The operation included the performing of a radical mastoid operation, the ablation of the lateral sinus and the superior petrosal sinus as far as the thrombus extended, and the subsequent resection of the jugular vein and the suturing of the upper fragment to the skin. This last procedure was carried out in order that in case the thrombus in the sinus became infected, the lower portion of the sigmoid sinus and the upper fragment of the jugular vein might be irrigated. The operation included also the extensive opening of the labyrinth through the promontory. The labyrinth was filled with easily bleeding granulation tissue. The findings then were characteristic of a labyrinthine disease although pus was not found there, since it never has been seen in this locality.

Since the operation the man is able to close his right eye somewhat better than before. We expect that his facial paralysis in the course of the next six weeks to two months will clear up, probably entirely. The rapid appearance of this facial paralysis made it necessary to consider not only the possibility of the nerve becoming infected from the extension of the process in the mastoid to the nerve sheath and then to the nerve itself, but also to the so-called Bell's palsy which occurs frequently after exposure to cold, and also to the possibility of this being a paralysis due to lues. In order to be sure we delayed operating until the serologic test could be made. The Wassermann on the blood and spinal fluid were both negative, but the spinal fluid showed an increase above the normal of lymphocytes, fifty-six cells per cubic millimeter. The albumin test was positive and the globuline test was plus.

The chief point of interest in this case is the fact that this man had developed a complete thrombosis of two important cranial sinuses without giving any evidence of the condition, that is, there were no symptoms characteristic of sinus thrombosis and examination was quite



negative except for the presence of a tenderness over the emissary vein.

DR. NELLIS B. FOSTER: This man came first into the Medical Clinic and with the history the diagnosis was at once suggested that he had an involvement of his labyrinth due to his old mastoid. There is one symptom that he had when he came to the Hospital which has not been mentioned, that is, an involvement of the superior oblique muscle of his right eye. Is that still present?

DR. CANFIELD: If so, it escaped my notice.

DR. FOSTER: The diagnosis which we made was the same as Dr. Canfield's except that we very much suspected that he had in addition a brain abscess. The diagnosis apparently was wrong, inasmuch as he is getting well from what has been done in an operative way.

DR. CANFIELD: We didn't suspect that he had a brain abscess. He may have one, although he is getting better. Examination of the fundus revealed no swelling of the disc. As a matter of fact, the diagnosis of brain abscess did not occur to us. It may develop later.

Subsequent note:

The patient made a complete recovery with restoration of the function of the seventh nerve.

## AN UNUSUAL CASE OF ANORECTAL FISTULA.

CYRENUS G. DARLING, M.D.

(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan).

Mr. M., age 27, entered the Hospital, August 8, 1916, with the following history: The patient had typhoid fever about one and a half years ago from which he fully recovered. Six months ago he noticed a swelling over the upper corner of the right gluteal muscles which became red and tender. A few weeks later this opened in three places without surgical aid and since that time has continued to discharge a thin straw colored fluid containing some flakes of pus. At the same time there was some tenderness over the lower part of the spine and the right thigh could not be flexed upon the body because of a pull of resistance in the region of the buttock. He now recalls that he had some pain in this locality during and immediately following the attack of typhoid and there was pain along the sciatic nerve line; also there was a limp in walking.

A provisional diagnosis of Pott's disease or osteomyelitis was made and further examination advised. Two days after entering the Hospital, the sinus with three openings was injected with bismuth paste and the patient was sent to the X-ray Department for radiographing. The radiographic report is interesting: (Fig. 2). About one inch below the skin, the sinus divides

into three paths. One goes directly forward to form a sacculated sinus cavity, which lies posterior to, external and about an inch superior to the trochanter major. It has at least four or five distinct pockets. It is either subcutaneous or lies between the gluteus maximus and medius. Another sinus tract passes medianward to the posterior portion of the right iliac synchondrosis and opposite the second sacral foramen, divides into two branches, one running laterally to an expansion on the posterior surface of the capsule of the hip joint, the other running mesially to join a comparatively large mass of opaque material which apparently is in the rectum.

A second plate was taken with reference to the osseous system of the head of the femur and sacral region. The report says, "No osseous lesion found to account for the sinus."

The lungs and blood were examined in the Department of Internal Medicine with negative results. He was sent home to return in six weeks, reentering the Hospital about the 28th of September. I saw him first at this time and in going carefully over his history to discover any possible infection or point of entrance, he incidentally stated that three years before he had a "boil" near the anal margin which was painful for a time, then ruptured and has given no trouble since. I made a rectal examination and found a slightly thickened point on the posterior part well within the anal margin. Careful inspection of the skin surface did not disclose any opening and it was only when I carefully tested with a probe a suspicious depression in the skin that an opening was found, the probe going into the tissues about two inches. The next day an anesthetic was given, the opening into the bowel readily found and the fistula laid open. I fully expected to demonstrate a possible connection of this cavity with the sinuses by means of a probe, but failed. The history would indicate that infection from the anal abscess had found its way beneath the skin and subcutaneous fascia and remained quiet until the attack of typhoid when it again became active but not sufficient to break through until some time after he had recovered from that infection. I have not yet been able to prove a direct connection between the fistula and the present sinus and abscess, but to me this seems, in the absence of bone lesions, the most plausible theory.

There is one point in rectal examination that is of importance. Any thickening of the margin of the anus as felt between the thumb and the examining finger should be carefully examined

for fistula, as these fistulae which open on the posterior margin may give rise to a number of sinuses extending in various directions.

#### DISCUSSION.

DR. JAMES G. VAN ZWALUWENBURG: This is the lantern slide of the radiogram of the sinus after injection in the case discussed in Dr. Darling's report. I hope Dr. Darling will pardon me if I correct him in the matter of the chronologic sequence of the X-ray examinations which he has exactly reversed in his report. That is to say, the examination by means of the bismuth paste was made after we had failed to discover anything by ordinary methods.

The course of the opaque material is easily followed virtually as in the written report in the body of the paper.

I think this case presents two remarkable features from a radiographic point of view; first that a sinus should find its way directly through the iliosacral synchondrosis and second, that it should produce so little evidence of inflammatory reaction in the surrounding bony tissues that it entirely escapes notice until after injection.

DR. HAROLD DE BLOIS BARSS: It might be interesting to state that after Dr. Darling operated for the fistula in ano, a second injection of bismuth paste was made, and two days later an incision was made under local anesthesia and nitrous oxide, laying open this whole sinus tract as far as it could be traced by the bismuth injection. We traced it over the gluteus muscle and found a dense fibrous tract which we excised. Then we traced it down to the sacroischial synchondrosis, but were unable to trace it further. We laid this open and excised all the dense granulation tissue which lined the sinus tract, cleaned it as well as we could and packed it with iodoform gauze. Since then the sinus has been healing. It is impossible to say whether this is temporary or whether the sinus will break out later. What relation this sinus has to the buttock condition we cannot say. It is possible that there was at one time a complete connection which has potentially healed, with a chronic infection in the buttock which has maintained a low grade virulence and caused this chronic sinus formation which may heal after this radical surgical procedure.

#### LANTERN SLIDE DEMONSTRATION AND RADIOGRAPH FINDINGS.

JAMES G. VAN ZWALUWENBURG, M.D.

(From the Department of Roentgenology, University Hospital,  
Ann Arbor, Michigan).

1. Case of small child who inhaled a wood screw.
2. Case of postpneumonic process in the left lower lung.
3. Case of cavities in the lungs with thin

walls and little other evidence of tuberculous process.

4. Case of traumatic pneumothorax.
  5. Case of decompression of the skull.
  6. Case of devitalized tooth showing that the filling does not go to the apex.
  7. Case of porcelain crown with a peg. Canine tooth, showing cavity in which iodoform had been injected.
  8. Case of sacralization of the fifth lumbar.
  9. Similar case.
  10. Exaggerated case of Pott's disease with destruction and scoliosis.
  11. Case of rickets.
  12. Case of appendectomy with a sinus which refused to heal.
  13. Case of pneumothorax.
  14. Case of bilateral congenital hip disease.
  15. Tuberculosis of the hip joint.
  16. Bilateral aplasia of the epiphysis of the head of the femur.
  17. Bony ankylosis as a result of tuberculosis of the elbow.
  18. Case suspected of having acute infectious arthritis. Shows elevation of the anterior margin of the astragalus—pathognomonic of flat foot.
  19. Case of fracture of the transverse processes of the second lumbar vertebra.
  20. Case of fracture of the fifth cervical vertebra, also luxation.
  21. Case in a child of osteomyelitis with sharply outlined sequestrum in the medullary canal. No evidence of supposed fracture.
  22. Osteomyelitis characterized by an extensive periosteal overgrowth suggesting lues.
  23. Case of carcinoma of the stomach.
  24. A similar case.
  25. Case of ulcer with obstruction of the pylorus.
  26. Case of hysteria with "something wrong" in the ilium adhesions.
  - 27 and 28. Two cases of appendicitis.
  29. Case of peptic ulcer with adhesions. Reported from surgeons that ulcer was healed but adhesions were cause of the trouble.
  30. Fragments of a china doll in a child's intestine.
  31. Case of a small boy with retention in the stomach and small bowel.
  32. Case of three ureters with two pelves to one kidney.
  33. Injection of a kidney pelvis showing kinking of the ureter.
- Cases 14, 15 and 16 represent three separate and distinct conditions, occurring simultaneous-



ly in both hips in children, which have many points in common, both physically and radiographically. It is rather remarkable that these three cases should have appeared at our laboratory in quick succession.

Case 14 (Fig. 3) is an ordinary picture of congenital dislocation of the hip with hypoplasia of the epiphyses of the head, with changes in the size, shape and direction of the neck and the relative hypoplasia of the shaft of the

of the bony trabecula while the head seems almost entirely separated from the neck at the epiphyseal line. In all probability this separation is secondary to the joint changes. This picture although not absolutely specific for a tuberculous infection makes this a presumptive diagnosis.

Case 16 (Fig. 5) is a much rarer condition. Here the acetabula are well formed. The shaft and the epiphyses of the great trochanter are



Figure 1. Localized erosion along the posterior surface of the condyle of the femur with some calcareous exudate in the capsule. Lues? Tuberculosis?

femora. The acetabulum is also shallow and the rim is poorly formed.

Case 15 (Fig. 4) comes from an older person. The right hip shows considerable destruction of both articular surfaces, most marked in the lower portion of the acetabulum and in the upper portion of the head. On the left side the joint space has almost entirely disappeared with considerable irregularity and disturbance

quite normal but the epiphyses of the femoral heads are entirely lacking. All this is without evidence of inflammatory reaction. This case represents a not uncommon anomaly in which either one or more than one of the set of ossifications of the long bone may be absent. It is, however, quite unusual to find a bilateral and symmetric absence of a single epiphysis.

Superficially the deformities produced by





Figure 2. Radiogram after injection of a sinus with bismuth paste. Opaque material enters at point A over the buttocks, passes forward to point B, where it divides, the outer sinus leading to a large abscess cavity. The internal sinus passed to C directly forward through the ilio-sacral synchondrosis, divides at D just anterior to the joint; one branch passes laterally to the posterior surface of the hip F, while the internal branch connects with the bowel at point E.

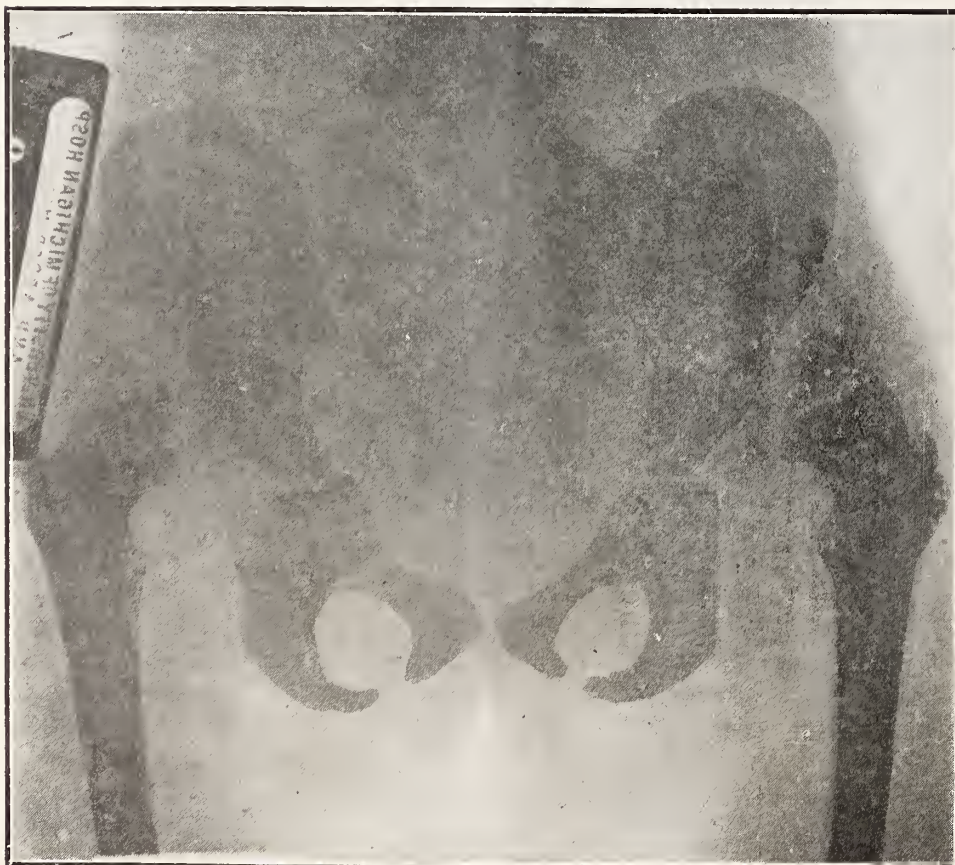


Figure 3. Double congenital dislocation of the hip





Figure 4. Double congenital dislocation of the hip with erosion of the head of the left femur and involvement of both acetabula. Probably the diagnosis is bilateral tuberculosis, pathological dislocation.



Figure 5. Congenital absence of the epiphyses of the head and necks of both femora. Congenital anomaly.



these three lesions are quite similar and the history will not distinguish between congenital dislocation and congenital absence of the head. This diagnosis of bilateral tuberculosis of the hip may be made with considerable certainty from the history and the physical examination. However, the involvement of both hips in one and the same individual is sufficiently rare to deserve some comment.

Case 16 represents a fracture which is seldom suspected and found with surprising frequency by the roentgenographic examination. It consists in the separation of the extremities of the lateral processes of the lumbar vertebrae. This injury is usually the result of a powerful blow directed obliquely from behind and from the

side in the upper lumbar region. In this particular instance, the man was struck by the sill of a freight car overtaking him from the rear. We have seen another case resulting from a fall across a piece of timber.

Usually a fracture of the ribs is suspected, because of the pain on breathing and the fixation of the side and it may be accompanied by injury to the kidney with hematuria. Usually the X-ray finding has been considerable of a surprise.

In every instance we have seen, the position of the fragments has been excellent and the only treatment which has been necessary has been rest in bed with a dressing designed to fix the trunk.

#### PROPAGANDA FOR REFORM.

*Patent Medicine Prosecutions Under the Food and Drugs Act.*—The following information was brought out in connection with prosecutions by the federal authorities chiefly under that portion of the Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims: Dr. Porter's Antiseptic Healing Oil was found to be essentially a solution of camphor and carbolic acid in cottonseed oil. It was claimed to be an excellent remedy for cuts, sores, old chronic ulcers, corns, bunions and a preventive of whooping cough, diphtheria and tuberculosis. Ballard's Horehound Syrup Compound was sold "For Consumption, Coughs and Colds" and other diseases. Dr. Shoop's Night Cure, was claimed promptly to cure ulceration, inflammation or congestion of the womb, leucorrhoea, painful ovaries and other female diseases. It was found to be suppository containing zinc carbonate, zinc sulphate and boric acid in a cacao butter. Dr. Shoop's Cough Remedy was found to be a syrup containing ammonium benzoate and probably white pine tar and gum. Dr. Shoop's Restorative was sold for the cure of all diseases of the stomach, liver and blood and still other diseases. Father John's Medicine was advertised as a consumption "cure." Dr. Shoop's Twenty Minute Croup Remedy was found to be a syrup containing glycerine and a small amount of salicylic acid. Bad-Em Salz was found to consist of sodium chloride, sodium sulphate, sodium bicarbonate, and a small amount of tartaric acid. It was sold with claims suggesting that it was derived from European springs and that it dissolved gallstones and gravel in the kidneys or bladder. Kennedy's Cal-Cura Solvent was a water-alcohol liquid containing 2.44 per

cent. potassium acetate, 16.75 per cent. alcohol, 52.46 per cent. cane sugar and vegetable matter resembling mint, cardamon and boneset. From the claims which were made one would get the impression that there could be few ills that it would not cure (*Jour. A.M.A.*, Nov. 4, 1916, p. 1385-6).

*Sleepy Water.*—Chicago physicians are told by the Sleepy Water Corporation that Sleepy Water is a "cure" for diabetes, Bright's disease and many other ills. The claim is also made that for six years not a single case of nephritis or diabetes treated with this water has failed to be cured. Sleepy Water sells for a dollar a gallon, but you cannot buy less than fifty gallons. At least a gallon a day must be taken and even five gallons a day may be taken "without any detrimental effect upon the heart action, no matter how bad the heart action seems to be." If we are to take the corporation's word for it, "Sleepy Water" has performed many miracles, although details of its *modus operandi* are not forthcoming, "as no autopsy has been performed on a person cured by Sleepy Water" (*Jour. A.M.A.*, Nov. 18, 1916, p. 1530).

#### DO YOU KNOW THAT

A little cough often ends in a large coffin?  
 Bodily vigor protects against colds?  
 Careless sneezing, coughing, spitting spread colds?  
 Open air exercise cures colds?  
 Colds sometimes get well in spite of the excessive use of alcoholic beverages?  
 Overheated, air-tight rooms beget colds?  
 Neglected colds often forerun pneumonia?  
 Persistent, oft repeated colds, indicate bodily weakness



**The Journal**  
OF THE  
**Michigan State Medical Society**  
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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Guy L. Kiefer .....	Detroit
W. J. Kay .....	Lapeer
W. J. DuBois .....	Grand Rapids

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EDITOR  
FREDERICK C. WARNSHUIS, M.D., F.A.C.S.  
Grand Rapids, Mich.

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All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.  
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January

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*Editorials*

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MID-WINTER COUNCIL MEETING.

The stated midwinter meeting of the Council of the Michigan State Medical Society will be held in the Parlor of the Statler Hotel in Detroit at 9:00 A. M. on January 24th, 1917, for the transaction of the prescribed order of business and such new business as may properly come before this executive body. An informal session of the members will be held on the evening of January 23rd, 1917, at Statler Hotel.  
Signed,

WILLIAM T. DODGE, Chairman.  
FREDERICK C. WARNSHUIS, Secretary.

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ANNUAL DUES.

Members and County Secretaries are reminded that the Annual Dues of \$3.50 per member for 1917 are now due. Prompt payment and remittance is requested. Please note that 1917 dues are \$3.50 in place of \$3.00 that prevailed in the past.  
It is urged that each member send his check to the County Secretary so that these funds become immediately available. Do it now.

AS OTHERS SEE US.

We as physicians are not always appraised and judged by our collective actions and more often the act, motive or expression of an individual is construed as representative and characteristic of the profession as a whole. The public appraises us as a group by the impressions conveyed to them by the isolated acts of the individual.

This being true to a large degree the business man, corporation manager, superintendent, attorney, banker and legislative representative is assuredly going to give but little heed to the professions' interventions, pleadings or petitions when they appear before committees to obtain just enactments in all laws pertaining to social and industrial insurance unless the impositions now being conducted are abandoned.

These impositions, and they are cropping out in increasing instances, consist of "farming" cases that come to doctors under the provisions of our Workingman's Compensation Act. In addition there are some who are even seeking to create cases, then render service, and aid the patient in "working-up" a case against an employer so as to cause him to pay the bill for the professional services rendered. Within a week employers of labor cited to us the following three impositions:

A doctor rendered a bill of \$36.00 for treatment of an employee who alleged injury to his back. Said injury was said lead to an abscess formation which required incision, drainage and dressings. When the claim was presented the employer's investigator delved into the ease. The circumstances surrounding the injury were not well established. Suspicion was aroused. The man, whose wound had not yet healed, was taken to another surgeon. This consulting surgeon in probing into the wound drew out a part of a "sack" that contained some "cheesy" material. It was apparent that the alleged injury consisted of a sebaceous cyst that the first doctor had but partly removed, sought to establish as an injury and to collect \$36.00 from the employer for a bungling job of removal. He wouldn't have dared to charge the man coming to him as a private patient a fee greater than \$5.00. Needless to add the employer did not pay the bill but what he said about that particular doctor and doctors in general was plenty. Little support may be expected from that employer,

who is an influential man, should the profession as a whole, solicit his support to secure legislative enactments that will conserve the interests of doctors.

Another case: A workman alleged he hurt his back lifting and went home. The man remained away from work for four weeks. In due time the doctor who attended him rendered a bill for \$45.00 for visits made at \$3.00 per visit. Investigation revealed that this employee was home for about ten days. The doctor made five calls at the man's home. Then the man was called to a distant city by reason of the death of his brother-in-law. He remained in that city several days after the funeral then returned home and two days later returned to work. This explained his prolonged absence and revealed that the actual time lost, on account of the injury, was but ten days. Evidently the doctor knew of the four weeks absence but had not perfected the details of his "hold-up" charges for the man stated the doctor called but five times. In a letter to the Doctor, in reply to his bill, the facts were plainly set forth by the Manager and payment flatly refused. The Manager welcomes an opportunity to air this case in a hearing before the Industrial Board. Of course now the doctor will not dare to force collection but this Corporation Manager has fixed opinions regarding doctors.

The last instance: A man was struck by a train, and fell under the cars and so sustained the loss of one leg at the hip and the other below the knee. The loss of blood was so great that when the man was brought into the hospital he was moribund and died about fifteen minutes later. Investigation revealed that the doctor attending instituted amputation and formation and suturing of flaps and completed his operative work about thirty minutes after the man had been dead. A bill was sent in in due course for \$200.00 for double amputation. The evidence farther established the fact that this doctor's double amputation was commenced approximately when the man breathed his last breath. With the above information in possession of the Railroad Company Attorney further comment as to whether or not the bill will be paid is unnecessary. However, the Company's respect for doctors has not been increased.

True these are but three isolated instances. Many similar cases exist and the sad part is that repetitions are occurring with increased frequency. Corporations, factories, firms and insurance companies are not asleep and unscrupulous doctors, yes and there are some who occupy prominent positions in communities, need not delude themselves that they have in the Compensation Act a medium for "easy-pickings" amongst employers of labor. Claims are being investigated and it is sometimes surprising how these keen and alert investigators "dig-up" facts.

We intend this as a warning and regret its necessity. If we desire fair treatment we must play fair, act fair and be judged honest as individuals for we, as a profession, are being judged by our individual acts. To persist will mean that these business men will stack their collective influence against ours when we appear before legislative committees.

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#### GOVERNOR WOODBRIDGE N. FERRIS.

It matters not to what political party we pledge our allegiance or upon what platform we stand, Governor Woodbridge N. Ferris during his term of office manifested by act and deed his interests in the problems of Preventive Medicine, Public Health Conservation and the Medical Profession. Largely due to his interest and activity Michigan has become a better and healthier state to reside in. The Public have learned to realize that health is a communal asset and that its conservation and betterment is a matter of public concern. This awakening has resulted in better schools, hygienic factories, public places and common carriers. Health First the people are learning means more than a mere slogan.

The efforts that are causing this public awakening have become and are effective largely by reason of the attention that has been directed to these problems by Woodbridge N. Ferris' attitude, public discussion and interest that he so frequently manifested and openly announced during his executive incumbency. By reason of which we, as a profession, are under obligation to the now Ex-Governor.

The *Journal* utilizes this opportunity to openly record and express the profession's appreciation. We assure his excellency that we have



not been unmindful of the support and aid rendered and that it will ever be a matter of pride to refer back to the years of 1912-1916 and to point out the things he was so instrumental in achieving in matters of health and health legislation. We again salute him and convey our sincere wish that the future will vouchsafe many years of active life and that we will be possessed of his continued support and assistance in the education of the public in health betterment and conservation.

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### THE SURGEON'S PART.

Those who were fortunate enough to hear Dr. Kellogg Speed last Wednesday evening, when he spoke before the Kent County Medical Society, gained a new and vivid idea of what American surgery and American surgeons are doing for the thousands upon ten thousands of cripples created by Europe's war. Dr. Speed has recently returned from an American base hospital in France—one of the typical units which American money has established on both sides of the line of fire and which American genius is operating. He brought a message—and pictures—to Grand Rapids which demonstrated the intimate personal horrors of war's disabilities; and the imagination did not have to be enlisted to realize what these horrors would be if it were not for the American hospital units and the American doctors and surgeons who are everywhere supplementing local Red Cross efforts which would of themselves be pitifully inadequate to meet the awful emergency. With all the accommodations which American generosity has provided on both sides of the fighting front, the war is hell personified. Dr. Speed demonstrated that beyond argument. But if it were not for the amelioration of conditions, thanks to these American units, the conditions would be so much worse that they would be utterly unspeakable.

The conclusion is inevitable. When peace returns, it will be chiefly the memory of the American surgeon which will hold for us a place of respect and affection in the continental heart. He is the Ambassador who is building for us, night and day, in old-world considerations. He is doing what ten times as many commercial attaches could never do. He is doing what all our money-lenders and muni-

tions-makers cannot even approximate. He is doing what our official diplomacy could never so much as attempt. He is bringing the true spirit of America close to the hearts and souls of sufferers, numbered into millions, who will never forget. Hats off to the surgeon!

It may be true, as Dr. Speed frankly says, that all Europe laughs at our supine submission to Mexican insult and invasion. It may be true that all Europe thinks we are quite "too proud to fight" and therefore tempting prey for an international buccaneer, pugnaciously inclined. It may be true that all Europe is deeply resentful that we have apparently capitalized her woe. But, when all is said and done, all Europe must be ringing with praise for her friend, The American Surgeon. All Europe must be everlastingly thankful for his tireless service to humanity. And when these present grim chapters are closed, Europe will thank us for him. The American Surgeon is our chief missionary for the future. He is our chief dependence for future international good-will.

—*Grand Rapids Herald.*

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### OUR SOCIETY ACTIVITIES.

We have not been laboring under an impending fear that our Society was existing in a state of coma—that dissolution was but a matter of time. Our affairs, our activities and our achievements have been moving along in a peaceful even tenor. There has been nothing of recent years that occasioned announcement or discussion in bold faced type. We have been enjoying the benefits of organized effort and action. Membership has been and is a valuable asset. Beyond the boundary of our state we have been appraised as an excellently organized body. Our influence has been exerted at home and abroad. In all things we have been abreast of the times; we have lived up to our organized objects. Notwithstanding the above we do confess that there have been occasions when the thought has arisen and the question has presented: Are we accomplishing all that can be accomplished; attaining all that is to be attained? Are we permitting opportunities to pass unnoticed; are we neglecting work that should be done? Are we merely existing and slowly drifting into a senile state of apathy? Are we fully abreast of the times?

These reflections have been frequently indulged in. The result has been that we were in doubt as to the balance that was indicative of our status.

The idea was then conceived to ascertain what our sister organizations were accomplishing. To that end a questionnaire was sent to all the State Secretaries. We are herewith imparting the answers received from that source. Our members may draw their own conclusions as to how well we are meeting up to our avowed purposes and wherein we may best become aggressive to increase our Society activities:

#### QUESTIONNAIRE.

1. What is your state membership?
2. Do you provide Medical Defense?
3. Do you as Secretary make the rounds of County Societies? If so how often?

4. What special movement or work is your State Society undertaking this year?

Do you pursue any special course to instill and stimulate County Society work? If so what?

6. What do you consider the most valued means of promoting organization interest and activity?

Additional information as to your organization activity will be appreciated.

#### ALABAMA.

1. 1774.
2. No.
3. No.
4. The improvement of the Public Health work. The State Medical Association is the State Board of Health. A representative visits each society as often as possible.

5. Yes. As stated above and also by correspondence of Secretary and two Vice Presidents.

6. The encouraging the reading of papers and reporting cases, so members will feel repaid for attending meetings. Also urging societies to perform their duty of looking after public health matters.

#### CALIFORNIA.

1. 2,500.
2. Yes.
3. At times.
4. When I have time.
5. No.
6. Give it up.

#### CONNECTICUT.

1. About 1,000.
2. No, now considering it.
3. County Societies meet only two times yearly. He sometimes attends.

4. None.

5. No.

6. Free dinners. We have no state journal or other means of keeping in touch with members.

#### COLORADO.

1. 834.
2. Yes after Sept. 1917.
3. No. When he feels like driving to an adjoining county.
4. Better fees under the compensation act Also the Medical Defense.
5. No. Used to have an organizer, but no good.
6. Good papers and lots of clinical material in the societies that exist.

#### DISTRICT OF COLUMBIA.

1. 560.
2. No.
3. In the D. of C. there are no constituent societies.
4. None.
5. ———
6. A weekly program of live scientific interest. (Oct. to May inclusive).

#### FLORIDA.

1. 590.
2. No.
3. No.
4. Medical legislation governing the qualifications for license.
5. No.
6. We have found that the publication of our *Journal* is very effective.

#### GEORGIA.

1. 1,500.
2. Yes.
3. No.
4. None.
5. No.
6. Some way of securing and keeping County Secretaries who are interested in organizations.

#### IDAHO.

1. 148.
2. No.
3. Yes about once a year.
4. Bettering our Medical Practice Law.
5. No.
6. Appeal to the doctor's pocket book.

#### IOWA.

1. About 2,200.
2. Yes.
3. No.
4. More interest in the annual meeting.
5. No.
6. Better co-operation among the County Medical Societies.



## LOUISIANA.

1. 962.
2. Yes.
3. Not regularly, but am in close touch.
4. Systematic organization. Development of District Medical Societies.
5. Letter writing.
6. Offering something for membership, Medical Defense, Medical Legislation, Medical Meetings, District and State Journal.

## MASSACHUSETTS.

1. 3,600.
2. Yes.
3. No. The president visits the 18 districts in two years.
4. Industrial Health Insurance and amendment of Workmen's Compensation Act.
5. An occasional letter to Secretaries.
6. ———

## MISSISSIPPI.

1. 1,000.
2. Yes.
3. No.
4. None This is our off year.
5. Work better if left alone.
6. Medical Defense, Good Fellowship, no active political campaign.

## MINNESOTA.

1. 1,592.
2. Yes.
3. No. The councilors are expected to visit each county in their district yearly.
4. None. Special.
5. ———
6. The State Journal and Medical Defense.

## MISSOURI.

1. 3,141.
2. Yes.
3. As requested by the Society.
4. Eliminating politics from the control of state eleemosynary institutions.
5. Annual gathering of the County Society Secretaries at annual meeting of the State Association.
6. Perpetual, persistent publicity of what the National, State and County Societies can do for the profession through the Journal and the visits of the President, the Secretary and Councilor of the District to the County Societies. Each year our President visits the County Societies, nearly always accompanied by the Councilor of the District and as often as possible accompanied by the Secretary of the Association. The President pays his own expenses but the Association pays the expenses of the Secretary who gives his entire time to the Association. This evidence of the State Association's interest in the County Society is demonstrating its value more definitely each year.

## MONTANA.

1. About 300.
2. No.
3. No.
4. Favorable legislation.
5. No.
6. Have not found any. Would like to know a few means.

## NEBRASKA.

1. 1,045.
2. Yes.
3. No. When invited when I can get off. No funds to pay expenses.
4. Arousing sentiment for better sanitation and Public Health Administration.
5. No.
6. Personal work by County Secretaries and officers in meetings and members in their counties. Next Council District meeting short, crisp papers by members in that District only on program. Outsiders as visitors only.

## NEVADA.

1. 48.
2. No.
3. No. No salary and no funds to carry on work of any kind.
4. None.
5. Not this year.
6. Am so thoroughly disgusted with trying to keep them together that I refused re-election at our meeting October 10-12.

## NEW JERSEY.

1. 1,700.
2. Yes.
3. Yes. Once a year.
4. Public Health relation to Legislation and Social Insurance.
5. No.
6. Personal visitation of state officers.

## NEW HAMPSHIRE.

1. 507.
2. No, but are planning for it.
3. No.
4. Medical Defense.
5. Only along general lines.
6. Attractive program. Attention to State Legislation. Fostering brotherly spirit.

## NEW MEXICO.

1. 225.
2. No.
3. No.
4. To secure Board of Health Law with full time Health Officer.
5. No.
6. ———

## NORTH DAKOTA.

1. 372.
2. We do.

3. Not regularly. Only occasionally when required.

4. Nothing special.

5. Yes and no. Different societies do different work—some discussions, others clinical cases, etc.

6. A live secretary is indispensable to the growth and activity of any society, he must be a live wire and eternally on the job to keep the drones in line.

## OHIO.

1. 4,350.

2. Yes.

3. No.

4. University extension, survey of fees, medical defense, special committee on systematic public health educational bulletin.

5. One Hundred Percent Club, Secretaries Association or collecting dues promptly.

6. Central office full time executive. Journal.

## NORTH CAROLINA.

1. 1,200.

2. No.

3. No.

4. None.

5. No.

6. Am praying for light on this subject.

## OKLAHOMA.

1. 1,411.

2. Yes.

3. No.

4. Putting into operation Medical Defense.

5. No.

6. Fostering personal pride of physicians in each county in organization work.

## PENNSYLVANIA.

1. 6,648.

2. Yes.

3. No. Perhaps three a year.

4. Endorsement fund. Changes to Workmen's Compensation Act. Watching Social Insurance. Prosecution of vicious legislation.

5. No. Keep everlastingly at it.

6. Personal work by President, Secretary and Councilors. Journal helps. Medical Defense is good.

## RHODE ISLAND.

1. 426.

2. No.

3. Yes. When possible.

4. Organization work through A.M.A. official organ.

5. Yes. Urging publication of Society proceedings in official organ. Papers read before local societies.

6. Personal visits by President and Secretary upon District Societies.

## SOUTH DAKOTA.

1. 325.

2. No.

3. No.

4. Better Health laws and prohibitive obnoxious legislation.

5. No.

6. ———

## TENNESSEE.

1. 1,573.

2. Yes. \$1 Annual Assessment.

3. No offers.

4. None. Building up membership.

5. County societies use A.M.A. course. Some of them devise their own.

6. Getting a good Secretary who is willing to work his head off in each County Society.

## UTAH.

1. 255.

2. No.

3. No.

4. Fight chiropractic or any violation to our Medical Practice Act.

5. No.

6. Getting together with banquet.

## VIRGINIA.

1. 1,800.

2. No.

3. No.

4. Perfecting county organizations.

5. Yes. Visiting by officers, Councilors and do all in our power to create an interest along this line.

6. Personal work.

## VERMONT.

1. 401.

2. Yes.

3. Not systematically.

4. Post graduate courses in each district.

5. Just hard work.

6. Regular meetings at not too long intervals and personal work.

## WISCONSIN.

1. 1,760.

2. Yes.

3. Visit county societies only as invited, ten to twelve times a year.

4. Hope to inaugurate University Extension teaching through our county societies.

5. Have made available for their programs in 1917 Wisconsin full time medical teachers.

6. Association of County Secretaries.

## WASHINGTON.

1. 986.

2. Yes.

3. When necessary but not as a matter of routine.

4. Political, medical aid and Drugless Healer's bills.

5. No.

6. a. Medical Defense.

b. Public Legislation.

c. Social Meetings.



## Editorial Comments

Dr. Philip Mills Jones, for fifteen years Secretary of the California State Society and Editor of the *California State Journal*, died Nov. 27 at his home in San Francisco. Death was caused by pneumonia. The profession of California has sustained, in the death of Dr. Jones, the loss of a member who was always zealously active in behalf of the profession at home and abroad.

Careful clinical observations on patients, together with studies of experimental pneumonia in the laboratory, have served to dispel some of the traditional beliefs in respect to the disease. We may take it as conclusively established, thanks in particular to the investigations of Porter, Newburgh, Means and Minot, that the blood pressure and the vasoreflex mechanism are not as a rule seriously impaired in pneumonia. Nor is the heart musculature greatly damaged; for the heart of animals dead of this disease may be made to contract normally when supplied with normal blood. Experimentally it has been observed that the respiration may fail long before the circulation is so seriously impaired. It now appears that the lung ventilation of pneumonic animals is greatly impaired, so that the respiratory mechanism fails to respond as effectively as is normal to increased concentrations of carbon dioxide. The failure of the respiratory mechanism in pneumonia is not necessarily due to the encroachment on the respiratory space in the lung, for the area of consolidation may remain unchanged while the impairment of the respiratory mechanism increases progressively. The respiratory distress increases while the percussion dullness does not extend. Not only is the reaction of the respiratory mechanism to carbon dioxide, its normal stimulus, greatly diminished in pneumonia, but also there is a progressive loss of reaction as the disease becomes more severe, until finally it may be entirely abolished. These observations, verified both for the pneumonic disease induced by the bacillus of Friedländer and that due to the ordinary pneumococcus, direct attention to the respiratory mechanism rather than the circulatory apparatus as a problem for immediate consideration in pneumonia.—*Jour. A.M.A.*

Please remember your 1917 dues are now payable. The mailing of your check today to your County Secretary will materially expedite matters and be the means of insuring your protection in mal-practice threats.

Sure you are busy. We are glad you are. You won't be busy in a few years though if you do not make it your distinct object to attend your County Meetings. You will very soon fall into a rut and behind the times if you fail to attend your society meetings. The reading of your medical journals is not all sufficient. Active organization work on your part is of paramount importance and should not be neglected.

The Wisconsin State Society has arranged a plan whereby the professors of the two Wisconsin Medical schools comprise a lecture bureau. These doctors have arranged to respond to assignments to address the component societies of the Wisconsin State Organization. A most commendable plan that promises to be effectively instructive and productive of good meetings.

What Michigan's profession needs concerns no one as much as it does ourselves. We do not assume that we are able to enumerate these needs. We do feel that you by your studies to become a better doctor, by your interest in medical and social problems, by your interest exhibited in society work, by your effort to enlighten the public on all things relating to hygiene, health and better living—with that attitude of mind and spirit manifested continuously and daily we need have but little concern as to the final analysis and result.

The following report is of interest and food for thought for those who are in charge of training schools.

Report of State Board of Registration of Nurses  
June and November Examinations, 1916.

Total number of subjects 9

Total number of questions 82

Total number candidates 272 of whom

218 were passed and

54 were failed

The passing mark on each examination is 70 per cent.

The following Training Schools for Nurses were represented in the examinations:

Name of Schools	Candidates	Passed	Failed
Battle Creek Sanitarium .....Battle Creek .....	34	29	5
Bay City Hospital .....Bay City .....	4	1	3
Blodgett Memorial Hospital .....Grand Rapids .....	12	11	1
Borgess Hospital .....Kalamazoo .....	1	1	0
Bronson Hospital .....Kalamazoo .....	7	7	0
Butterworth Hospital .....Grand Rapids .....	13	8	5
Calumet and Hecla Hospital .....Calumet .....	1	0	1
Calumet Public Hospital .....Laurium .....	1	0	1
Children's Free Hospital .....Detroit .....	6	6	0
City Hospital .....Jackson .....	6	5	1
Edward Sparrow Hospital .....Lansing .....	6	5	1
Grace Hospital .....Detroit .....	13	12	1
Hackley Hospital .....Muskegon .....	2	2	0
Harper Hospital .....Detroit .....	34	34	0
Homeopathic Hospital .....Ann Arbor .....	10	7	3
Hurley Hospital .....Flint .....	3	2	1
Mercy Hospital .....Bay City .....	8	4	4
Mercy Hospital .....Jackson .....	2	2	0
Mercy Hospital .....Muskegon .....	2	0	2
Mercy Hospital .....Big Rapids .....	1	1	0
Nichols Memorial Hospital .....Battle Creek .....	8	7	1
Paulina Stearns Hospital .....Ludington .....	1	1	0
Petoskey Hospital .....Petoskey .....	1	0	1
Port Huron Hospital .....Port Huron .....	5	2	3
Providence Hospital .....Detroit .....	8	7	1
Saginaw General Hospital .....Saginaw .....	5	5	0
St. Mary's Hospital .....Saginaw .....	9	6	3
St. Mary's Hospital .....Detroit .....	4	4	0
St. Mary's Hospital .....Grand Rapids .....	9	5	4
St. Joseph's Sanitarium .....Ann Arbor .....	2	1	1
St. Joseph's Sanitarium .....Mt. Clemens .....	1	1	0
Samaritan Hospital .....Detroit .....	3	2	1
State Hospital .....Newberry .....	3	3	0
State Hospital .....Kalamazoo .....	6	2	4
State Hospital .....Traverse City .....	2	0	2
University of Michigan Hospital ..Ann Arbor .....	17	17	0
Woman's Hospital .....Saginaw .....	1	1	0
Woman's Hospital .....Detroit .....	8	7	1

Schools from other states:

Name of Schools	Candidates	Passed	Failed
Butler Hospital .....Providence, R. I. ..	1	1	0
Hinsdale Sanitarium .....Hinsdale, Ill. ....	2	2	0
Hope Hospital .....Fort Wayne, Ind. ..	1	1	0
Mary Thompson Hospital .....Chicago, Ill. ....	1	1	0
Memorial Hospital .....Worcester, Mass. ...	1	1	0
Mercy Hospital .....Waverly, Iowa ....	1	1	0
Mercy Hospital .....Pittsburg, Pa. ....	1	1	0
Ravenswood Hospital .....Chicago, Ill. ....	1	1	0
Sarnia General Hospital .....Sarnia, Ontario ....	3	1	2
State Hospital .....Topeka, Kansas ...	1	0	1



Don't just remember and note our advertisers but *patronize them*. Continue to do so.

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The Council at its January meeting in Detroit will designate the place and time for the holding of our 52nd Annual Meeting. Bay City and Battle Creek have extended invitations.

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Representatives of the medical staff of the Kalamazoo State Hospital have conducted a series of mental clinics in Grand Rapids. We are not informed as to whether similar clinics have been held in other communities. It has come to us that this clinic in Grand Rapids has had a large attendance. We would welcome a report, for publication in *The Journal*, as to the scope, object, ends attained and experiences encountered by these State Hospital representatives. It is possible that if the profession learns the details that the value of such clinics may be recognized and it become desirable to hold them in several communities. May we not have a report Dr. Ostrander?

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The man succeeding, the man that is climbing higher, the man who enjoys a remunerative practice is always found to be the man who is active in his local state and national organization. He attends their meetings, finds time to read several medical journals of known worth and also takes time out to attend clinics. To emulate that example is a long step forward on the road to success.

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Out of 330,179 school children examined in the city of New York in 1914, 194,207, or 58.8 per cent., suffered from defective teeth. This exceeded the sum total of all the other defects noted by nearly 80,000. Defective teeth impair general health and impede school progress. Disorders of the digestive tract, tuberculosis and various other diseases frequently are preceded by diseased conditions in the mouth. There is a direct relationship between dental development and mental development, and it is absolutely essential to good work in schools that children's teeth be maintained in a healthy condition. The Public Health Service recommends that a good tooth brush be included in the list of presents for every American child and that its use be made a part of the daily training. If this recommendation is carried out the United States will have more healthy children this year than last and their chances of growing

up into useful, healthy men and women will be increased.

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"Let Sentiment Rule; Boost for Michigan," such is the appeal of one of our new advertisers in this issue. Reader, you are urged to read this and the other new ads in this issue, and then will you not demonstrate your loyalty to your publication and its advertising supporters?

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At the annual meeting of the Kent County Medical Society the secretary reported that the society's publication *The Bulletin*, had produced a revenue for the year of some \$450.00. Of course this was made possible by the advertising copy it carried. This *Bulletin* consists of but eight pages. The demonstration has been made. What was done in Kent County can be repeated by other local societies. Kent now has a fund of some \$800.00, largely derived from the *Bulletin*. The societies annual dues are \$6.00. The membership is 163.

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California has created an indemnity fund in connection with its Medical Defense feature by assessing each member \$25.00 to be paid in installments. A similar assessment in Michigan would in three or five years provide an indemnity fund of \$57,500.00. This amount would be sufficient to pay all judgments obtained against members for a goodly number of years.

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What is becoming of your reports of meetings Bay, Saginaw, Kalamazoo, Pontiac, Genesee, Benton Harbor, Ottawa? True, paper is expensive but not so much that we are compelled to abandon publishing your reports if you would but send them in.

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A certain clergyman physician hailing from Arabia and desirous of returning home is calling on the profession to sell his books on Arabia to secure funds. We have learned that since commencing the sale in Philadelphia he has sold some 15,000 copies at \$2.00 per. The profit of this sale must have amounted to \$8,000 or \$10,000—enough to make several trips to Arabia. By the time he reaches the Pacific coast he should be able to sail around the world on a private yacht. The solicitation is an imposition on the profession and is condemned.

## Correspondence

Imlay City, Dec. 12, 1916.

To the Editor:

In most every medical journal one picks up one finds one or more articles in regard to quack doctors and patent medicines.

In medical societies these subjects are discussed and plans devised to protect the public from advertising doctors and from patent medicines on the theory that both are injurious to the health of the people.

The members of the medical societies are supposed to represent all that is good in the profession and to their everlasting credit most of them do. However, occasionally we find a member beside whom an advertising quack is an angel in comparison.

The advertising quack does not belong to a society because no one will have him. But in his advertising he openly admits that he is a quack while the fellow in the society does his dirty work under the guise of a reputable doctor who belongs to the medical society and must therefore command respect.

These are the men who make bold promises to cure diabetes mellitus, Brights disease and cancer no matter where located. Who tell people the liver is the size of the palm of the hand and as "hard as a piece of sole leather." Who diagnose the location of an intestinal obstruction by having the patient swallow a glass of water and telling the exact spot in the bowel where the water met the obstruction. Who diagnose gastropnoxis by the laying on of hands only—no gas, air or X-ray used. Who pad breasts after the removal of carcinoma so that the breasts look as natural as ever. "We are the only people doing this, don't you know." Who tell a patient that the lung is hardened from tuberculosis but it can be softened by applying one electrode anteriorly and the other posteriorly and "shooting" medicine through the lung. Who can always feel an appendix, tell how long it is, the direction in which it runs and how many kinks are in it.

These are the men who tell a poor woman with recurrent cancer of the breast that she has tuberculosis that can positively be cured. Then after working her for all the money she has tell her the truth and get her out and away as quickly as possible. Who cure exophthalmic goiter with electricity and medicine and work the patient until the heart is so bad he can hardly get out of town and then send him to Rochester for operation. Who tell a patient they can see "three ulcers of the stomach" by looking at them with a fluoroscope without a bismuth or a barium meal. Who tell patients they are one day too late. "If you had come yesterday I could have cured you." Who find out what some other man has told a patient and then tell him

some thing else when they know the first man is correct.

These are the men who make a diagnosis of another man's case twenty miles away when they have never seen the case and all they know about it is what a neighbor has told them. Who stop other men's cases on the street and beg for business. Who go into a home in consultation with another doctor and agree with him and then go back to the home and tell the family something else.

These are the men who curette and pack a fibroid uterus stopping hemorrhage temporarily at the same time telling the patient and family that the uterus has been removed.

As I said before the advertising quack is an angel compared to these people. They are supposed to protect sick people. Instead they consider sick people their natural prey and proceed to fleece them.

It is true that the American people like to be humbugged and nobody likes to do it better than the faker in the profession. It seems to me that it would be advisable to start cleaning house within the ranks. We should not be so bashful about setting the seal of disapproval upon such methods as outlined above and then we could find fault with the evils upon the outside with better grace.

Sincerely yours,

DR. M. B. McCausland.

Cadillac, Mich., Dec. 14, 1916.

Dr. F. C. Warnshuis, Editor of the *State Journal*,  
Grand Rapids, Mich.

My Dear Doctor:

If there is a movement under way to pass a law whereby it will be illegal for any person to administer an anesthetic, except by a legally qualified physician, I beg to submit the following.

It is many times impossible for a physician doing obstetrical or emergency surgical work in the smaller towns and rural districts to obtain the services of a colleague, where it is possible to have a competent nurse administer such anesthetic as is required. This being especially true in obstetric work. Thus relieving a great deal of suffering that could not be done otherwise, both on account of expense and not being able to obtain assistance.

Even in the larger towns of ten or fifteen thousand people it is not always possible to have or to maintain a physician who is expert in this line and especially in nitrous oxid anesthesia. Even where there is only one man in a community who is expert, it is not always possible to obtain his services when most needed.

Where it is possible to obtain the services of a well trained nurse or Sister, with her three years of training and who has taken special training in anesthetic work, and often is really much more



expert and competent than the average physician who has not made this line a special study.

Whereas the busy practitioners throughout the State, have not, as a rule, found it profitable to take a special training in this line or have familiarized themselves in the use of nitrous oxid anesthesia as well as of the others, which makes it extremely hard to obtain a competent service in this line.

If laws are passed it would be far better to pass one requiring any one who is engaged in the very important work of administering anesthetics to take a special training from some of the recognized schools and be compelled to display a certificate showing they are competent.

Such a short course would put this branch of the profession on a high standard and could work no hardship to any one and then there would be both fully competent nurses and doctors to do such work.

It is perfectly reasonable to expect a nurse with her three years of training and a special course in this line to understand the physiology, chemistry and therapeutics of anesthesia and be competent to make breath examinations for acidosis, blood pressure for shock, urine examinations etc., as well as being able to measure lung capacity and all the many other things that go along with anesthetic work. Although a surgeon in charge of any operative case should have thoroughly prepared his case for the operation which always includes a thorough physical examination and which includes examination of the heart, lungs blood, urine etc., and it is for him to decide the kind and extent of the anesthetic to be used and not the anesthetist.

Whereas there are many competent nurses throughout the State who are doing such work and are very competent, it would work a very great hardship to them as well as to the physician and people who have to employ them.

It is a matter of necessity that physicians have had to employ nurses to administer anesthetics.

Whereas such men as the Mayo have employed Sisters of Mercy to assist them. The late Dr. J. B. Murphy of Chicago has done the same and our own State Hospital of Ann Arbor who not only employs Miss Davis as an anesthetist, as an instructor as well in the art of giving anesthetics, and thousands of other prominent surgeons who have found it advisable to have received better service by employing a nurse to administer anesthetics.

A physician as an anesthetist is more or less interested in the surgical work going on and quite often his attention is attracted to the work being done instead of concentrating his attention on the anesthetic.

It is much easier to discipline or criticize a nurse where a doctor would not stand for a reprimand, which often is deserved.

In obstetrical work a physician cannot afford to give six to eight hours of his time administering anesthetics for a fee of five dollars, while many nurses are doing so and can afford to do it.

And since the popularity of gas-anesthesia, this form of painless child-birth is becoming more and more popular every day and in greater demand by the laity

The great objection to the nurse giving anesthetics is the question of dollars in the doctor's pocket, rather than to her ability.

GEO D. MILLER, M.D.

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## Deaths

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**Dr. Oliver Heidt** of Detroit died Nov. 24. He was a young man but 25 years old and had practiced only a short time. Six of his former class mates were his pall bearers. He is survived by a widow to whom he had been married only two months.

**Dr. John Snyder** of Mecosta died Dec. 12. He was 55 years of age and his death was the result of angina pectoris. His health had been poor for the past year.

**Dr. R. W. Odell** of Detroit died Nov. 28. He was 75 years old. By his death Detroit has lost a citizen whose activities in the medical line extend back to the Civil War.

**Dr. M. C. Sinclair** of Grand Rapids, prominent citizen died Nov. 27, after an illness of about four weeks as the result of acute inflammation of the heart. Dr. Sinclair has been one of the stalwarts in the history of Grand Rapids for forty years. Not only did he attain unusual prominence in his profession but he was always active in political, fraternal and religious works. His death brings a widespread loss for wherever he was known he was respected and esteemed.

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## State News Notes

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### MORTALITY IN MICHIGAN, November, 1916.

There were 3,392 deaths reported to the Department of State as having occurred in the State of Michigan during the month of November, 1916. This number corresponds to an annual death rate of 13.4 per 1,000 estimated population. In addition to the

above there were 273 stillbirths returned as deaths.

By ages, there were 551 deaths of children under one year of age; 177 deaths of children aged one to four years, both inclusive and 1,105 deaths of elderly persons aged 65 years and over. The number of deaths of infants under one year of age show a decrease, and the number of deaths of elderly persons aged 65 years and over show an increase over the number reported for the preceding month.

Important causes of death were as follows: Pulmonary tuberculosis, 176; other tuberculosis, 28; typhoid fever, 38; diphtheria and croup, 57; scarlet fever, 22; measles, 6; whooping cough, 10; pneumonia, 258; diarrhea, enteritis, under two years, 88; meningitis, 18; influenza, 19; cancer, 203; violence, 274. In addition to the above there were 14 deaths returned from poliomyelitis (infantile paralysis), 3 from tetanus and one from pellagra.

As compared with the month immediately preceding an increase is noted in the number of deaths reported from diphtheria, scarlet fever, pneumonia, meningitis, influenza and cancer. A decrease in the number returned is noted in the returns from the other important causes noted above.

The distribution of deaths referred to above by counties and by cities as well as by the most important causes may be seen in the table shown in the Monthly Bulletin of Vital Statistics, which is published by the Department, and is for free distribution.

Upon referring to the table of counties we find the greatest mortality rate is for the county of Luce. This county shows a mortality rate of 35.2 per 1,000 estimated population. Wayne county, with a rate of 44.3 shows the highest birth rate for the month.

In the table of cities, we find that Ann Arbor shows the highest death rate for the cities of the State. Detroit City with a rate of 40.6 shows the highest birth rate in cities of over 5,000 population.

The different State Institutions, (hospitals and asylums) reported deaths as follows: Traverse City, 13; Kalamazoo, 20; Lapeer, 1; Newberry, 10; Pontiac, 18; Ann Arbor, 25; Wayne County House, 44.

There were 6,404 births returned to the Department as having occurred in the State during the month of November. This number corresponds to an annual birth rate of 25.3 per 1,000 estimated population. A decrease of 150 births is noted as compared with the month immediately preceding. In addition to the above there were 274 stillbirths returned as births.

The following Endowment Committee has been appointed to handle the campaign for the Detroit College of Medicine and Surgery: S. T. Miller,

Burt R. Shurly, F. B. Walker, E. W. Clark, H. B. Joy, A. Lewis and John Dwyer.

Dr. A. O. Brown, of Detroit, and Miss Isabelle Logan, also of Detroit, were married on November 2d. They will be at home at 1044 Third avenue, Detroit, after December 15th.

Dr. Vernor M. Moore announces the opening of an X-ray laboratory in the Metz building in Grand Rapids.

St. Johns now has accommodations for six patients in a suite of rooms that have been fitted up and leased for that purpose.

Dr. Geo. L. Le Fevre, of Muskegon, sustained fractures of two ribs when his auto skidded into a tree.

Mrs. Wm. Fuller, wife of Dr. Wm. Fuller, of Grand Rapids, died during the second week in December.

Dr. H. Hulst has assumed direction of the X-ray Department of the Grand Rapids Clinical Laboratory.

Dr. Enos C. Kinsman has been appointed local surgeon for the Pere Marquette Railroad for Saginaw and vicinity.

Dr. E. C. Lee, of Detroit, and Miss Fegan, of El Paso, were married Nov. 9th.

Harper Hospital, Detroit, is erecting a \$250,000 Nurse's Home.

Dr. J. D. McEachron, Vermontville, sustained a fracture of his wrist while cranking his auto.

Work has been started on the \$3,000 tubercular sanitarium in Wexford county.

Dr. Glenn Young, of Detroit, and Miss Avis L. Green of Corunna were married on Dec. 6th.

Dr. John L. Porter, of Chicago, conducted an orthopedic clinic in Grand Rapids on Dec. 10th.

Detroit physicians are agitating a movement to raise their fees to \$3.00 per visit.

Hospitals in Detroit and Grand Rapids have advanced their rates.

The Battle Creek Sanitarium is planning a \$200,000 Home for Nurses.

Manistee county has engaged a visiting tuberculosis nurse.



Dr. Morley S. Vaughan has resigned as Prison Physician at Jackson.

Dr. Moll, of Kenton, is now located in Flint.

## **County Society News**

### **CHIPPEWA COUNTY**

The annual meeting of the Chippewa County Medical Society was held at the Park hotel and officers were elected for the coming year.

Dr. J. J. Lyon of Algonquin, was elected president and Dr. R. E. Stocker of Brimley, was chosen as vice-president, Dr. R. C. Winslow was re-elected as secretary-treasurer.

Dr. C. J. Ennis was selected to represent this county at the next meeting of the State Medical Society. Dr. F. H. Husband is the alternative delegate.

An interesting feature of the meeting was a paper read by Dr. O. W. Cox on the subject: "How Modern Surgery Began." Dr. Cox is in the government medical service and was recently appointed to look after the marine practice here and also act in all federal cases.

The session was one of the most enjoyable ever held by local physicians.

R. C. WINSLOW, Secretary.

### **EATON COUNTY**

Sixth regular and annual meeting of the Eaton County Medical Society was held at Charlotte, Nov. 23, 1916.

Business meeting was held at Hotel Phoenix, followed by an informal dinner given by the Charlotte members of Eaton County Medical Society. Dues were increased to \$5 per year.

Election of officers for ensuing year as follows:

President—A. H. Burleson, Olivet, Mich.

Vice-President—Wilson Canfield, Eaton Rapids, Mich.

Secretary-Treasurer—G. M. Byington, Charlotte, Mich.

Delegate—A. G. Sheets, Eaton Rapids, Mich.

Alternate Delegate—W. M. Taylor, Potterville, Mich.

Member Medico Legal Committee—A. W. Adams, Bellevue, Mich.

Members of the Board of Directors are:

A. R. Stealy, Charlotte.

H. C. Rockwell, Dimondale.

C. A. Stimson, Eaton Rapids.

W. E. Newark, Charlotte.

C. C. Sackett, Charlotte.

Committees to be appointed later by President.

### **SCIENTIFIC PROGRAM.**

#### **1. "Surgical Obstetrics."**

Dr. Alexander M. Campbell, Grand Rapids.  
Discussion opened by Dr. F. R. Blanchard, Eaton Rapids.

#### **2. "What the General Practitioner Should Know About the Breast."**

Dr. Plinn F. Morse, Detroit.  
Discussion by Dr. R. C. Stone, Battle Creek.

Meeting adjourned with everyone feeling a most excellent afternoon had been spent and that the program committee should be given credit for securing such interesting talks, papers, etc., during the past year.

The next meeting is to be held Jan. 25, 1917.

G. W. BYINGTON, Secretary.

### **GENESEE COUNTY**

During the afternoon of the annual meeting of the Genesee County Medical Society, which was held in the Masonic Temple, the time was devoted to election of officers, and a clinic on dermatology by Andrew P. Biddle of Detroit.

The following were elected as officers for the ensuing year:

President—J. W. Handy.

Vice-President—J. W. Orr.

Secretary—R. S. Morrish.

Treasurer—F. B. Miner.

Member Board of Directors (5 years) E. D. Rice.

Delegate to State Society (2 years) C. D. Chapell.

Alternate—F. E. Reeder.

The following were admitted to membership: Lucy M. Elliott, C. C. Probert, Ivan Lillie, D. L. Treat of Flint, Fred Burt of Goodrich, and D. L. Sullivan of Flint.

In the evening a banquet was served in the Elks Temple to about 80 guests from Shiawassee, Bay, Saginaw, and Lapeer counties, who had the pleasure of listening to a paper by Dr. Charles L. Mix, of Chicago, on "The Diagnosis of Biliary Tract Infections," while Dr. Andrew P. Biddle spoke on "The Awakening of the Public to Medical Problems."

R. S. MORRISH, Secretary.

### **GRAND TRAVERSE-LEELANAU COUNTY**

The Annual Meeting of the Grand Traverse-Leelanau County Medical Society was held at the office of Dr. J. B. Martin, Traverse City, on Tuesday evening, November 14. The following officers were elected for the ensuing year:

President—Dr. H. Thurtell, Traverse City.

Vice-President—Dr. L. Swanton, Traverse City.

Sec.-Treas.—Dr. F. Holdsworth, Traverse City.

Member Medico-Legal Committee—Dr. J. D. Munson, Supt. Traverse City State Hospital.

Following the routine business the Society enjoyed a banquet.

W. D. MUELLER, Secretary.

### GRATIOT-ISABELLA-CLARE COUNTY

The annual meeting of our Society was held Dec. 14, at Brainerd Hospital, at which time we had a symposium on pneumonia. A good part of the afternoon was spent in discussing a case of illegal practice. One A. Bernard who styles himself an Indian, or herb doctor. We have been trying for over a year to have him prosecuted without any result. The latest thing from the prosecutor is if we will sign a complaint and give bonds to reimburse the county in case there isn't any conviction. The latter part was what stuck us, that we should be compelled to pay for the prosecution of a violator of the laws of the State. If anyone else has succeeded in having such an illegal practitioner put out of business we would like to hear how they did it.

The annual election of officers was as follows:

President—S. E. Gardiner, Mt. Pleasant.

Vice-President—C. T. Pankhurst, North Star.

Sec-Treas.—E. M. Highfield, Riverdale.

E. M. HIGHFIELD, Secretary.

### KALAMAZOO COUNTY

#### SECRETARY'S REPORT FOR 1916.

The Academy of Medicine has convened for twenty regular sessions and one special session during the year. The first meeting in June was dispensed with because of conflict with the meeting of the American Medical Association in Detroit. There were no sessions during August because of the intense heat of the summer. The sessions were held in the Academy rooms with the exception of the July meetings when the Academy enjoyed the hospitality of the Allegan and the South Haven physicians.

The Academy has one hundred and thirty-five active members and eight associate members. Sixty-seven of the active membership practice in the city of Kalamazoo and sixty-eight practice outside of Kalamazoo. Ten members are outside of our territory as a county society.

Four members were removed from our society by death: Dr. Noble, of Kalamazoo; Dr. W. H. Bills, of Allegan; Dr. Harlon Smith, of Schoolcraft; and Dr. H. B. Osborne, of Kalamazoo.

The Bulletin has been published every two weeks announcing the programs and containing papers and abstracts of papers read before the Academy. The Chairman of the Library Committee has compiled

a list of the prominent articles found in the medical magazines subscribed for by the Academy and this list has been published in the Bulletin. It was thought that such a list would be of value to Academy members in their selection of medical literature and would save each member time to look over all the magazines. If this purpose has been accomplished and it is the desire of the Academy, the list of prominent articles will be continued during the coming year.

During the year, the Academy procured the services of a pediatrician, Dr. W. H. O. Hoffman, of Chicago, to conduct a course on infant feeding and pediatrics in Kalamazoo. This course was attended by fifteen members.

Dr Hoffman delivered six lectures and conducted five clinics at the Kalamazoo Infant Welfare Station. Such post-graduate courses are of inestimable value and the Secretary suggests that more such courses be arranged for during the coming year. The Academy of Medicine was the first County Society in the State to conduct a post-graduate course at home.

The Academy is indebted to The Upjohn Company for the publication of our Bulletin, which has been done without profit to them. We are truly grateful for the interest they have manifested in the Bulletin and also for their proofreader, who has relieved the Secretary of this work.

To the officers, committee chairmen, committee-men and Academy members, we extend "Greetings" and we trust that the year of 1917 will bring to the Academy of Medicine a bond of unity and co-operation that will make our Society a more potent factor to our Community and to the State.

Respectfully submitted,

LESLIE DEWITT,  
Secretary.

#### TREASURER'S ANNUAL REPORT FOR 1916.

##### Receipts

Brought forward from 1915 .....	\$ 4.60
Received from 67 active members at \$8 ....	536.00
Received from 68 active members at \$5.50 ...	374.00
Received from 8 associate members .....	19.25

Total receipts .....\$933.85

		Est. Budget 1916	Est. Budget 1917
Disbursements			
State Society dues ....	\$417.00	\$420	\$469
Guests .....	56.15	125	100
Stenographer .....	17.35	25	25
Permanent improvements	20.00	27	
Postage .....	70.21	100	100
Flowers .....	25.55	15	25
Lightning .....	6.66	10	10
Janitor service .....	41.85	25	30



Library .....	66.72	75	50
Telephone and telegrams	32.72	20	40
Printing .....	89.80	70	125
Insurance .....	10.20		
Incorporation .....	7.80		
Miscellaneous .....	9.85		4
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	\$871.86		

Balance cash on hand Dec. 2, 1916, \$61.99.

It will be seen that the amounts estimated as needed for certain items have not been used, and for certain other items the amount has been overdrawn. Of the accounts not entirely used it must be remembered that this report was compiled before it was possible to know the amount of the expense for the annual meeting. There is an order for stamped envelopes which will completely use the estimated \$100. The amount expended for guests has fallen below the estimate because it has been unnecessary to reimburse a number of our guests for their expenses. Toward the end of the year it was seen that the amount in some accounts was being overdrawn and it has been necessary to curtail disbursements in other accounts in order to close the year without a deficit.

In order that the several accounts in our budget may be checked out in a more accurate and systematic way, it is the recommendation of your Treasurer that the funds of the Academy be handled by the use of a distribution and controlling ledger and that each account be kept within the budget estimate if at all possible to do so.

Special assessment with interest, \$212.61.

Respectfully submitted,

R GENUNG LELAND,  
Treasurer.

ESTIMATED BUDGET FOR 1917.

State Society Dues 134 members .....	\$469.00
Guests .....	100.00
Stenographer .....	25.00
Postage .....	100.00
Flowers .....	25.00
Lighting .....	10.00
Janitor .....	30.00
Library .....	50.00
Telephone and Telegraph .....	40.00
Printing .....	125.00
Miscellaneous .....	4.00
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Total .....	\$978.00

Estimated Receipts.

61 members at \$8.50 .....	\$518.50
73 members at \$6.00 .....	438.00
8 associate .....	21.50
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	\$978.00

(Signed)

L. H. Stewart.  
L. H. S. Dewitt.  
R. G. Leland.  
Budget Committee.

ANNUAL REPORT OF THE PROGRAM COMMITTEE.

The Academy of Medicine convened for twenty regular programs and one special program during the year. Contributions to the programs were made by fourteen Academy members and by thirty-three members of the profession outside of our society.

Our essayists came from Detroit, Battle Creek, Chicago, Ann Arbor, Grand Rapids, Flint, Jackson, Fort Wayne, Persia, California, and Siam.

Through the courtesy of the Mulford Company, the Academy enjoyed a moving picture lecture of the manufacture of biological and pharmacological products.

Two of our programs were in Allegan and South Haven and the Academy members enjoyed the hospitality of the physicians of both cities.

One clinic on Tuberculosis, one on Internal Medicine and Neurology and one Surgical Clinic were conducted during the year.

The following subjects were presented in the year's programs:

Pathology .....	1	Dermatology .....	2
Gen. Med. Interest..	2	Psychiatry .....	1
Syphilis .....	2	Case Reports .....	9
Surgery .....	8	Bacteriology .....	2
Medicine .....	11	Otology .....	3
Roentgenology .....	1	Anesthesia .....	1
Pediatrics .....	4	Gynecology .....	1

Respectfully submitted,

J. H. VAN NESS,  
Chairman.

ANNUAL REPORT OF CLINICAL COMMITTEE.

There have been three successful clinics held in the past year: One by Dr. Balch at the State Hospital, one by Dr. Pattenger and one by Dr. Maurice L. Goodkind of the University of Illinois. All were good, but the attendance might have been better.

There is plenty of clinical material to be had in Kalamazoo and more should be done in the way of clinical features in our association work.

The greatest difficulty and one which has seemed, heretofore, difficult to overcome, is to know in time who is to appear upon the regular program so that a clinic can be arranged.

If this can in any way be remedied the clinical feature can be very much improved.

Very respectfully,

PAUL T. BUTLER,  
Chairman.

ANNUAL REPORT OF THE LIBRARY COMMITTEE.

Six leading medical and surgical journals have been subscribed for this year.

The state journals and a few others are presented, four of which are of high standard and contain valuable and original communications. These are: New York State Journal,

Cleveland Medical Journal,  
St. Paul Medical Journal,  
Illinois Medical Journal.

That the articles in these journals may be noted easily, a list of those seemingly of most value in the different lines of work of the Academy members is published in Bulletins as the journals appear.

A complete list for the year of these prominent articles will be found in a special book on the Journal table.

The American Medical Association Journal for the past five years is filed on the shelves in the store room back of the lavatory.

Surgery, Gynecology and Obstetrics, since 1907, is also on file. Annals of Surgery since 1905 to 1910 is on file, and for 1915. Public Health reports from Washington and monographs on special subjects from Washington and from individuals for the current year are also on file.

The library has been managed each year without any systematic scheme. As a result promiscuous subscriptions have been made and journals have wandered from the library. It seems most advisable that some plan be adhered to from year to year in order that the library be of real value. Some plan can be presented to the Board of Directors for approval.

The books obtained or donated this year are the following:

Monographic Medicine—

Vols. I. to V.—Baker, Hewlett, Elsner, Fellson.

Mortality from Cancer Throughout the World.

Autobiography ..... Trudeau

Surgery, Gynecology and Obstetrics, numbers for 1913 are desired that the files may be complete up to date. A presentation now of these numbers will be appreciated.

Annals of Surgery for 1911, 1912, 1913 and 1914 is also desired.

Attention is called to a number of old books—some dating back to 1739, on the library shelves and interesting standard books of 1850-1870.

The books in the library were cataloged by an expert some five years ago. This needs to be completed and continued regularly.

It is requested that there be not presented to the library books or periodicals of obsolete or secondary value.

BLANCH N. EPLER,  
Chairman.

#### ANNUAL REPORT OF ANTI-TUBERCULOSIS COMMITTEE.

The work of the committee during the past year has been entirely educational and co-operative. During the past year through the efforts of the Anti-Tuberculosis Society and the assistance of your committee we have seen the work of the open air school entirely taken over by the Board of Educa-

tion and at the same time the work of the dispensary has been continued by the Board of Health.

It has been our pleasure to co-operate in and endorse the work of the State Tuberculosis Survey.

The committee has done everything possible to assist in the prosecution and exposure of fraudulent tuberculosis remedies.

Respectfully submitted,  
R. GENUNG LELAND,  
Chairman.

#### ANNUAL REPORT OF THE SOCIAL HYGIENE COMMITTEE.

This committee has acted in co-operation with the Probation Officer in individual cases, and given personal instruction whenever possible.

There have been few regularly appointed talks given: Two by Dr. Ellsworth, at the Y. W. C. A. Two by Dr. Elsie Pratt, at the High School.

The A.M.A. Committee of Public Health Education, several years ago gave talks before clubs, schools, and other organizations, in the effort to create a proper public sentiment with reference to matters of social hygiene, and since that time specialists have been secured to give addresses on the subject.

In view of the action taken by the State meeting, it is the opinion of this committee that the Academy should take some action with reference to reporting venereal diseases. Although the State Board ranks them with other communicable diseases, there have been very few cases reported in the entire state.

Respectfully submitted,  
DELLA P. PIERCE,  
Chairman.

#### ANNUAL REPORT OF THE SOCIAL FUNCTIONS COMMITTEE.

As chairman of your Social Functions Committee, I beg to submit the following report:

We have had twenty-five luncheons at the local hotels: One at Allegan, the members of the Academy being entertained by the Allegan County Physicians; one at South Haven, they being entertained by the physicians of the City of South Haven.

They were all very well attended, there being an average of twenty-four at each luncheon.

Yours very respectfully,  
R. U. ADAMS,  
Chairman.

#### KENT COUNTY

At a special meeting on the 6th of December, Dr. Kellogg Speed of Chicago addressed the Society on "War Surgery." He showed a large number of most unusual pictures taken at a field hospital on the French front where he was surgeon in charge until July, 1916. The ability, resourcefulness and



the good results attending the necessarily hasty treatment of such an enormous number of wounded, were a revelation to the large audience which greeted Dr. Speed. Many guests from a distance were present.

The Society held its fourteenth annual meeting at Grand Rapids on the evening of December 13th. The following officers were elected: President, Dr. F. J. Lee; Vice-President, Dr. V. M. Moore; Secretary-Treasurer, Dr. Frank C. Kinsey; Assistant Secretary-Treasurer, Dr. Wm. J. Hyland; Delegates to the State Society, Dr. J. D. Brook, Dr. F. C. Kinsey and Dr. H. J. Pyle; Alternates, Dr. W. H. Veenboer, Dr. J. W. Shanks and Dr. A. Nyland. Defense League Representative, Dr. G. L. McBride. Two new offices were created, Dr. James Brotherhood being elected to the position of supreme manipulator of the magic lantern, while Dr. John Coryell was unanimously chosen as exalted answerer of telephones. After the election, the entire Society participated in a supper at the Morton Grill as the guests of the newly-elected President.

FRANK C. KINSEY, Secretary.

## Book Reviews

**Syphilis.** By Loyd Thompson, Ph.B., M.D., Physician to the Syphilis Clinic, Government Free Bath House; Visiting Urologist to St. Joseph's Hospital; Consulting Pathologist to the Leo N. Levy Memorial Hospital, Hot Springs, Arkansas; First Lieutenant, Medical Reserve Corps, United States Army; Member of the American Urological Association and the American Association of Immunologists. Octavo, 415 pages, with 77 engravings and 7 colored plates. Cloth, \$4.25, net. Lea & Febiger, Publishers, Philadelphia and New York, 1916.

In preparing this volume for the profession it has been the aim of the author to present the subject of syphilis in as practical a manner as possible. For this reason a considerable portion of the work is devoted to diagnosis and treatment. The chapter on laboratory diagnosis is made especially full, as today the desirability, in fact the necessity, of laboratory aid is more evident for the successful treatment of syphilis than for any other disease. Matters of theoretical and historical interest, of course, are discussed, but usually only when they have some bearing upon the practical handling of the subject.

Syphilis, today, no longer is to be considered a genito-urinary disease, nor a dermatological disease, nor a disease belonging exclusively to any specialty; but is to be thought of as a disease requiring knowledge in all fields of medicine. As Osler remarks, "Know syphilis in all its manifestations and relations and all other things clinical will be added unto you." It is, however, the genito-urinary specialist upon whom the burden of responsibility should rest, for he it is who, as a rule, sees syphilis in the be-

ginning, and if his work is well done there should be no need for that of others in the majority of cases.

The author has drawn freely from the literature of syphilis at his command for his material and has added his personal views and experiences. The illustrations are, to a large extent, from photographs taken by the author of cases in his own practice.

## Miscellany

*Human Ease.*—The federal authorities have issued a fraud order, denying the use of the mails to the Human Ease Medicine Co., of Atlanta, Ga. Human Ease was guaranteed "to cure all diseases both in and on man and beast." Analysis showed it to be an ointment composed of lard with a little sodium bicarbonate, sodium sulphate and potassium nitrate, flavored with oil of sassafras. (*Jour. A.M.A.*, Nov. 18, 1916, p. 1540).

*Tartrates in Nephritis.*—While the vegetable acids, such as citrates, burn to alkali in the body, the tartrates are not so converted, and leave the body nearly in their original form. Underhill and others have shown that tartrates in large doses can cause tubular nephritis in animals. While human beings tolerate without apparent kidney disturbance small doses of tartrates, either given medicinally or as they occur in baking powders and in certain foods, and while it would probably require very large doses to cause kidney inflammation, it would seem inadvisable to give food rich in tartrates or to give medicinally large doses of tartrates in nephritis (*Jour. A.M.A.*, Nov. 25, 1916, p. 1601).

*Toilet Lotion.*—Nothing is better to soften and whiten the skin than the official cold cream. For oily skins a tragacanth lotion is suitable (*Jour. A.M.A.*, Nov. 25, 1916, p. 1618).

*Some Misbranded Nostrums.*—The following "patent medicines" were found misbranded by the federal authorities: A. D. S. Cod Liver Oil Comp., claimed by the American Druggists' Syndicate to be a sovereign remedy in pulmonary tuberculosis, was not possessed of the virtues claimed, nor a preparation of the active principles of pure Norwegian cod liver oil. Johnson's Chill and Fever Tonic, claimed to be a "guaranteed remedy" for dengue fever, typhoid fever, measles and la grippe, was a watery solution of Epsom salts and cinchonin hydrochlorid. A. D. S. Peroxide Talcum Antiseptic and Deodorant, sold by the American Druggists'

Syndicate with the claim that it contained a peroxide and to be a wonderful antiseptic and germicide, was found to have no antiseptic properties and no detectable peroxide. Dr. King's Royal Germetour, claimed to be a "germ destroyer," was found to consist essentially of 98 per cent. water and 2 per cent. sulphuric acid, saturated with hydrogen sulphid (*Journal A.M.A.*, Nov. 18, 1916, p. 1541).

*More Misbranded Nostrums.*—The following "patent medicines" have been found misbranded under the U. S. Food and Drugs Act, chiefly because of unwarranted and false therapeutic claims: Dr. Jones' Liniment was recommended for corns, toothache, backache, "rheumatism," and various other conditions. Analysis showed it to be "essentially a gasolene solution of oleoresin of capsicum, oil of sassafras, methyl salicylate, and evidently, volatile oil of mustard." Graham's Dyspepsia and Heartburn Remedy was found to contain, among other things, sodium bromide, sodium bicarbonate, magnesium carbonate, sugar, chloroform, alcohol and small quantities of morphine. It was asserted to be a remedy for gastritis, ulceration or threatened cancer of the stomach, and all disorders arising from an impaired digestive system.—Mother Hart's Baby Syrup admittedly contained opium and alcohol. It was asserted to be "A Safe Remedy for the Home." Dr. Hale's Household Ointment was sold as "A Positive Specific for the Speedy and Permanent Cure of Rheumatism, Lame Back, Neuralgia" and many other conditions. Analysis showed the ointment to be composed of "vaseline and camphor with a small amount of aromatics resembling oil of thyme." Dr. Greene's Nervura was sold for nervousness, nervous debility, weakness, poor blood, etc. It was found to contain 18 per cent. of alcohol and celery, ginger and other unidentified vegetable material were indicated. Hill's Freckle Lotion was claimed to be absolutely harmless when used externally according to directions. Yet it was found to contain corrosive sublimate. Dr. Hiatt's Germicide was sold as a specific for croup and for diphtheria, quinsy, sore throat, etc. It was a syrup containing sodium benzoate, phenol, alcohol, a small amount of glycerin, probably balsam of toluene and flavored with oil of wintergreen (*Jour. A.M.A.*, Nov. 25, 1916, p. 1615 to 1616).

*Intravenous Therapy.*—The technic, although not difficult, must be thoroughly mastered, or undue pain, infection, air embolism, or even death may result.

Often a drug has an action different from that obtained by the usual method of administration. Deaths have resulted not only from a lack of proper technic, but also from a lack of knowledge of drugs so administered. Thus death has followed the injection of an iron preparation containing peptone, and also following intravenous injection of ether. Intravenous injections, while sometimes superior to the slower methods, are distinctly inferior when a continuous rather than a sudden action is desired as with iodids, nitrites, iron or salicylates. Intravenous injections should not be resorted to unless distinct advantages are to be secured, as when immediate action is necessary in emergencies, where the drug is not otherwise absorbed or is destroyed in the stomach. In the light of our insufficient knowledge of the action of simple drugs when administered intravenously, the injection of complex mixtures of drugs is particularly reprehensible (*Jour. A.M.A.*, Nov. 11, 1916, p. 1450).

*Unna's Paste for Varicose Veins.*—In the treatment of varicose ulcers of a mild form Dr. Ochsner prepared a boot composed of several layers of a bandage, each treated with Unna's paste applied hot. The paste consists of gelatine 4 parts dissolved in 10 parts hot water to which 10 parts glycerin and 4 parts zinc oxide are added (*Jour. A.M.A.*, Nov. 25, 1916, p. 1617).

*What Ailed Him?*—A druggist wants to know what ailed the patient for whom the following was prescribed: calomel 1 grain, potassium iodide 4 drachms, potassium bromide 3 drachms, potassium citrate 5 drachms, tincture of aconite 2 fluidrachms, wine of ipecac 1 fluidounce, chloroform water to make 3 fluidounces. Without venturing a guess regarding the patient's illness, it is suggested that if anything new was wrong with the patient after he took the medicine, the case may be diagnosed as one of misplaced confidence, either the physician's misplaced confidence in drugs or a patient's misplaced confidence in the physician. (*Jour. A.M.A.*, Nov. 18, 1916, p. 1541).

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### Original Articles

#### INSANITY AND PELVIC DISEASES IN WOMEN.\*

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The idea that insanity in women may stand in causal relation to disordered function or disease of the pelvic organs, is of very ancient origin, and undoubtedly arose on the hypothesis that the uterus, being the cradle of life, was also a Pandorian box from which all nervous and mental deflections were liberated.

If we trace the subject back to the earliest, prehistoric times, we will find that such a theory is not inconsistent with the then existing religious belief, for sex-worship was one of the earliest forms of devotion, and the sexual organs the most sacred of known objects.

Woman, therefore—representing one element in the trinity—was thought to be the subject of demoniacal possession of the mysterious organ whenever her mental integrity became involved.

That pelvic disease is of very frequent occurrence among insane women, is shown by the following tables, which also indicate the different groups of psychoses in 326 and 100 cases respectively.

TABLE I.<sup>1</sup>

PSYCHOSES	PELVIC DISEASE
Senile .....	11
Dem. paralytica .....	25
Psychoses associated with other diseases	11
Alcohol .....	25
Drug .....	3
Infective exhaustive .....	1
Invol. melancholia .....	9
Depression, undif. ....	25
Dem. praecox .....	71
Paranoic condition .....	15
Manic depressive .....	73

\*Read before Section on Gynecology and Obstetrics, Fifty-First Annual Meeting, M.S.M.S., August, 1916.

1. Aline E. Perkins, M.D., *Psychiatric Bulletin*, January, 1916, p. 28.

Epilepsy .....	14
Psychoneuroses .....	6
Const. inferiority .....	14
Imbecility with insanity .....	15
Unclassified .....	4
Not insane .....	4

326

In 100 unselected cases taken from the wards of the Pontiac State Hospital I found the following:

TABLE II.

PSYCHOSES	PELVIC DISEASE
Dementia—	
Epileptic .....	12
Paretic .....	4
Chronic .....	23
Monomania .....	20
Paralytic .....	2
Doubtful .....	1
Epilepsy .....	1
Epileptic—	
Insanity .....	1
imbecility .....	1
Imbecile .....	4
Mania—	
Acute .....	2
Chronic .....	8
Recurrent .....	7
Melancholia .....	9
Paranoia .....	2
Insanity—	
Recurrent .....	1
Circular .....	2

100

Such statistics, showing the kinds of pelvic disease associated with particular psychoses, however interesting they may be, are misleading for such associations are not constant, and will be found to vary with each new series examined. Personally I do not believe that, as a rule, the pelvic condition has anything to do with the type of the associated psychosis. In the first table the percentage of cases in which pelvic disease was found was 68, while in the second list it happened to be 100, a total which would not often occur, as 81 per cent. fairly represents the frequency in cases which have come under my own observation. I have elsewhere classified

the pelvic disorders which are most commonly found in insane women.<sup>2</sup>

If we accept Petersen's definition that "Insanity is a manifestation in language and conduct of disease or defect of the brain," it is necessary to determine what causes may lead to the mental affection and to what extent, if any, pelvic disease in woman enters into the production of these morbid processes in the higher cerebral centers. In order to arrive at definite and logical conclusions, we may not assume that, because a woman suffering from uterine or adnexal disorder develops insanity, we are dealing with a case of *post hoc propter hoc*, and so dismiss the matter as settled, but rather by careful study of antecedent conditions and past history, together with analysis of present psychic and somatic findings, we must gather all available data from which reasonable deductions may be drawn.

Such investigation will demonstrate what has been so well stated by Mendel,<sup>3</sup> and confirmed by all alienists, that "In the great majority of cases the insanity is the product of a combination of causes, and only in part of the intoxication psychoses and those called forth by trauma does a single etiological factor seem sufficient to produce the disease."

And it will be further discovered that, in an exceedingly large number of cases scrutinized, the incidence of heredity appears conspicuous. This implies that an inherited instability of the nervous system, a psychopathic taint, predisposes to mental breakdown, the necessary combination of conditions only being required to precipitate the explosion. "A sound nervous system may break down as the result of financial ruin, consequent starvation and physical illness; but an unstable nervous system may break down on account of normal uncomplicated childbirth." (Stoddart).

As illustration, let us take a hypothetical case, one which might be founded on reality so common are such histories. A woman with inherited nervous instability lives a monotonous life on the farm, works hard, has little or no recreation, possibly has borne children in rapid succession. An added burden is suddenly imposed; a member of the family is taken ill. She is persistent in her care of the sick one; she passes disturbed, wakeful, anxious nights; her appetite fails; her functions become deranged, insomnia supervenes and, finally, the mental and physical stress becoming too great, her mind gives way. She is taken to an asylum,

where a badly lacerated cervix, a defective perineum, and an endometritis with profuse leucorrhea, are found—conditions which may have existed, in part, for years without giving rise to particular distress. Under hospital treatment and the repair of the local lesions, the woman recovers her mental health and in due time is returned to her home. Can it be truly claimed that in such an instance the pelvic disorder was responsible for the mental derangement? Yet it is in just such cases we so frequently hear it positively asserted that the local disease was responsible for the insanity, no account whatever being taken of the other more potent exogenous causes, or of the underlying psychopathic taint.

It is true that occasional cases do present in which the insanity is apparently due to the direct influence of the pelvic pathology, as following continued brooding over the presence of a tumor or the like, but such instances are of so infrequent occurrence as to be almost negligible. A case of this kind is reported by Russell.<sup>4</sup> An attendant on an epileptic ward herself became epileptic. Examination revealed the presence of double ovarian new-growths. Both ovaries were removed—one of which weighed nine pounds—and the patient immediately recovered her mental health. Take on the other hand one of my own cases: A patient, with a bad heredity on one side, was apparently cured by the removal of an ovarian cystoma, but relapsed in the course of a few weeks, and continued as an asylum patient. In another case, from a family of neuropaths, the operative treatment of an ovarian cyst, with the repair of other defects, resulted in relief of the active mental symptoms, but a return to her home surroundings, brought on a renewed attack and she again became a resident of the asylum. In each of these cases the presence of the abnormal growths might be claimed as the exciting cause of the insanity, but, with the exception of the first, the pelvic condition was probably only one of several incidents, in the development of the mental catastrophe.

In what has been said, reference is had only to the usual genic disorders, and no account has been taken of the toxemias and infections, especially those of pregnancy and childbed, which may be directly traced to the pelvis. Neither can we, in our present knowledge of the internal secretions of the ovary, state with any assurance, what effect the perverted function of these glands may have on the normal working of the cerebral cortex—the seat of the

2. Am. Jour. Obstetrics, January, 1899, p.

3. Text Book of Psychiatry, 1908, p.

4. Proceedings Royal Soc. Med., Dec., 1911.



mind. I believe, however, that it may be positively affirmed that pelvic disease in women has but little influence in the production of mental alienation.

But, irrespective of causation, there can be no doubt that insane women suffering from pelvic disorders, from an humanitarian point of view at least, are entitled to any and every form of treatment which will lessen local irritation and relieve somatic suffering.

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### RELATIONSHIP BETWEEN GYNECOLOGIC AND NEUROLOGIC CONDITIONS.\*

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Smith's admirable review of the literature on the relationship between gynecological and neurological conditions not only shows the interest the gynecologist has always had in such relationship but also demonstrates that he has progressed in his understanding of the subject. Yet, while this is undoubtedly true of the man with experience in the diagnosis and treatment of diseases peculiar to women, the erroneous conclusions based upon imperfect observations are so prevalent today that I welcome this symposium which I think is particularly timely. For failure to recognize what gynecological treatment can accomplish in the case of the woman with a functional nervous derangement is so disastrous for both patient and physician that any earnest discussion of the subject can hardly fail to be of benefit.

For the purpose of this discussion it will be assumed that the term neurosis means a functional disturbance of the nervous system or parts of that system. Notwithstanding the advances which have been made in neurology during the past twenty-five years, the word "neurosis" must still be used for a train of symptoms or for a condition which from their very nature can hardly be otherwise than indefinite. At least this is certainly true for those who are not specializing in neurology, but who first see and examine women whose nervous systems are deranged. The intelligent practitioner is usually able to distinguish with a fair degree of accuracy between organic and functional nervous derangements. In the case of men there is no hesitation regarding treatment. Their genital organs are not interfered with but the patients are advised regarding the treatment, general

or local, appropriate for the particular case. But with women suffering from functional nervous derangements, it is entirely different. So firmly fixed is it in the minds of the profession and of the laity that functional nervous diseases in women are caused or at least aggravated by pelvic disease, that so-called treatment of the female genital organs is at once begun no matter whether they be diseased or not. How common is the experience of examining a woman with all sorts of nervous manifestations who has been subjected to months or years of office treatment or possibly has undergone two or three surgical operations for pelvic lesions which we are quite certain never existed. In the great majority of cases this unnecessary treatment was not carried out for pecuniary reasons but from failure to grasp certain fundamental facts regarding the relationship between the female pelvic organs and neurotic conditions, or because of an inability to determine whether the pelvic organs were actually diseased. In either case the physician is at fault for if he be not competent to make a diagnosis, he has no right to subject his patient to unnecessary pelvic treatment.

What we want to get out of our minds is the fixed idea, which might very well be called a neurosis on our part, that there must be a connection between functional nervous derangements in women and disease of the pelvic organs. No one can deny that there may be such a connection, but that there must be is far from the truth. After all, when once this fundamental fact is grasped, it comes down to a matter of diagnosis. In a given case has the woman a functional and not an organic nervous trouble, and second, has she any trouble in the pelvis. If she has, is this a local manifestation of her faulty nervous system or is it due to true pelvic pathology.

Reviewing our cases they naturally fall into certain groups. These types of cases are not always distinct for there will be borderline cases where it will be difficult and, sometimes almost impossible, to assign them to any one group, but as a rule they can be fairly well classified as follows:

1. Women with neurological symptoms whose pelvic organs are anatomically and physiologically normal.

2. Women with neurological symptoms whose genital organs are anatomically normal but whose functions are abnormal.

3. Women with derangements of the nervous system whose pelvic organs are unquestionably diseased and where the disease may aggravate

\*Read before Section on Gynecology and Obstetrics, Fifty-First Annual Meeting, M.S.M.S., Houghton, August, 1916.

but does not necessarily cause the nervous manifestations.

4. Women of naturally good nervous organizations whose nervous manifestations have followed upon and hence apparently are due to true pelvic lesions.

1. Women with neurological symptoms whose pelvic organs are anatomically and physiologically normal.

Naturally this is a smaller group than the one next to be considered since the neurotic woman is apt to have pain in the pelvis, especially at menstrual periods, just as she is prone to have pain in other parts of her body. Still there are many women with unstable nervous systems whose menstrual functions are perfectly normal and who have perfectly normal pelvic organs until perhaps they are injured by injudicious treatment. The neuroses may be congenital or acquired, may be mild or severe, yet the menstrual functions may be perfectly normal. Perhaps the largest number of individuals of this type are to be found among the epileptics, if we may class this disease among the functional neuroses. At least for our purposes it may be so classified, since its relationship or rather lack of relationship to pelvic disease is so illustrative. In many women epileptics the attacks come only at the menstrual periods, the latter being regular and painless and the pelvis perfectly normal. This leads to the faulty deduction that removal of the ovaries and the resulting cessation of the menstrual flow will lead to a cessation of the epileptic seizures, notwithstanding the mass of clinical evidence to the contrary. Nothing, perhaps, is more pathetic than the efforts of the patient and her family to prevail upon the gynecologist to perform the operation in question. Too often the conscientious specialist's advice is not heeded and the operation is performed by some surgeon unacquainted with or unheedful of the experience of the past, with the result that the victim of epilepsy not only soon has as many if not more seizures to endure, but to this disappointment is added the sufferings due to the ushering in of the artificial menopause.

What has been said about the epileptic is just as true for the woman who suffers from hysteria, neurasthenia, neuralgias in various parts of the body, hyperesthesia and anesthesia areas. The pelvic organs and their functions may not be deranged, although this is usually the case. If, however, the woman be so fortunate as to escape such derangements it is the height of folly to interfere in the pelvis under the mis-

taken impression that thereby the patient will be benefited.

In this group should be placed the girl just before or during puberty or when menstruation is delayed. Her nervous manifestations may be congenital or may be transitory and due to her age. In the large majority of cases it is best to treat such patients without reference to the pelvis, giving them the benefit of the doubt with the idea that eventually their pelvic functions will be normal. It is little short of criminal to give so-called local treatments to such patients. Such a course, more than anything else, aggravates the nervous trouble and may be the factor in making them confirmed nervous wrecks.

2. Women with neurological symptoms whose genital organs are anatomically normal but whose functions are abnormal.

In this group may be placed the great majority of young unmarried women suffering from some form of functional nervous trouble with manifestations in the pelvis, although the pelvic organs are apparently normal. Such patients not infrequently have poor family histories, coming from stock with unstable nervous systems, where there are many instances of alcoholism, epilepsy, hysteria and mental peculiarities. However, in the majority of instances the neuroses are not congenital but acquired as shown from the fact that up to a certain age the patients have been perfectly healthy. Young women belonging to this group will be found largely among those who have developed their brains at the expense of their bodies, school girls, school teachers and people of that class. No matter what arguments may be presented for the emancipation of women, their right to choose careers which will not compel them to undergo the hazards of childbearing, I do not think it can be gain-said that they pay a certain price for such privileges. It is almost impossible to get at the inner life of the individual, hence impossible to judge how much the unsatisfied longing for maternity may affect the nervous system. The individual herself usually fails to realize the cause of her restlessness which she seeks to assuage by more and more intellectual labor or in some cases by the diversions of society. All these causes of nervous instability are hard to grasp, difficult to define, but that they exist is beyond question.

Pelvic examinations in women belonging to this group are not easy to make without anesthesia, and bimanual recto-abdominal examinations, especially in fleshy women, are not always satisfactory. Such patients almost always have



hyperesthesia in the lower abdomen, hence tenderness in the region of the ovaries is of very little, if any, diagnostic value. One must decide almost entirely upon the anatomical findings whether the pelvic organs be diseased and usually this can be done by experienced hands without anesthesia. In the hands of the inexperienced, diagnosis is out of the question either with or without anesthesia. These patients are great sufferers from injudicious pelvic interference. Palpation of the lower abdomen shows areas of tenderness either in the right or left lower abdominal quadrant. If the tenderness be at the right, without consideration of the history, it is assumed that the appendix is diseased and should be removed. If the hyperesthesia be to the left, the left ovary is at fault and should be removed. The patient is promised a subsidence of her nervous symptoms after the offending organ has been removed and is deeply disappointed when these symptoms still remain and even increase months and years after the operation.

In the face of our past experience before it was realized that pain in the region of the pelvis does not necessarily mean disease, it is certainly refreshing to hear the explanations of the operator regarding his findings. The appendix is reported as being long, the longest ever seen, as if it were disgraceful for this organ to be beyond a certain size. If a concretion be found in the appendix, the whole question is settled. Such a concretion gave rise to excruciating pain low down on the right side and accounted for all the neuroses present. When the patient not only does not improve nervously after the operation but even grows worse from the trauma incident to the surgical procedure, the operator styles her a neurasthenic or crank and washes his hands of her. Can it be denied that such is the history of thousands upon thousands of cases in this country every year? These mistakes in diagnosis, if they can be called mistakes, need occur in only a small percentage of cases if the physician be competent to outline accurately the contents of the pelvis and realizes that pelvic pain and tenderness, dysmenorrhea and menstrual irregularities may, in the presence of anatomically normal pelvic organs, be explained as local manifestations of a generally vitiated nervous system.

What such patients need is the most common sense general treatment; change their occupations, curb their intellectual ambitions, see that their bodies as well as their minds are exercised, encourage marriage, and take away the fear of childbirth from their minds. All

these things and more along the same line will help, provided the true condition be recognized and the pelvic organs be left alone.

3. Women with derangements of the nervous system whose pelvic organs are unquestionably diseased and where the disease may aggravate but does not necessarily cause the nervous manifestations.

In this group there is a distinct relationship between the pelvic lesions and neuroses, that is, the latter are usually made worse by the irritation of the local disease. It is necessary to use the greatest judgment in determining the degree of such relationship and here the history of the case will prove most valuable. In the case of a woman suffering from relaxation of the pelvic floor due to childbirth or to long standing pelvic inflammation, it is of the utmost importance to determine what kind of a nervous system she had before there was disease in the pelvis. In the case of a woman with relaxed pelvic floor suffering from bearing-down sensations, backache, headache, insomnia, etc., it is most essential to determine whether she was normal so far as her nervous system was concerned prior to the appearance of the pelvic trouble. If she gives a history showing a previous unstable nervous system, she must be told that while undoubtedly her nervous symptoms are enhanced by the pelvic lesions and while the cure of the pelvic disease will make her better since it will remove a certain source of irritation, such treatment need not be expected to substitute one kind of a nervous system free from neurotic tendencies for another which the patient probably has had from birth. In other words, the same holds true here as in the case of the insane woman. It is a fundamental principle of treatment of the insane to remove all source of irritation, mental or physical which may make them worse, but no one these days expects the insane woman to be cured by the removal of the pelvic trouble. So with the woman with a neurotic tendency or one suffering from various neuroses, her pelvic lesions should be cured but that in itself does not mean that she is to become a normal individual so far as her nervous system is concerned.

The patient and friends should be told this before any treatment be instituted for the relief of the pelvic lesions. It is best to overemphasize this fact to counteract the tendency of such women to expect too much from pelvic operations. Otherwise, they may be doomed to disappointment and the operator placed on the defensive, for the woman has been operated upon, yet is not cured so far as her nervous

system is concerned. It is unwise to speak of reflex pain and explain neuroses of central origin as being reflex from pelvic lesions. Best be on the safe side and tell such patients that the cure of the pelvic condition only removes one source of irritation, that such treatment only places the patient in a position where treatment directed toward the nervous system may be expected to result in either a cure or an amelioration of the symptoms. Personally, I prefer to turn such patients over to the neurologist for treatment after the pelvic condition has been attended to, since I have come to realize that the best results in the case of the neurotic individual can only be obtained by a special treatment which most practitioners have not the time nor patience to carry out.

4. Women with naturally good nervous organizations whose nervous manifestations have followed upon and hence apparently are due to pelvic lesions.

Quite a percentage of women can be placed in this group. Here, the naturally normal nervous organization has been changed to an abnormal one from the irritation due to neglected pelvic lesions. Here, the headache, backache, insomnia, mental depression, etc., are directly caused by the pelvic trouble and when this is rectified, they disappear and the patient reports that she has never felt better in her life. These are the grateful patients who sing your praises because you have been so successful. In reality your work was the same with the patients in the group last considered, but it is hard to be grateful when you are miserable, which again is a lesson to us to be careful what we promise from pelvic treatment.

Some five or six years ago, my colleague, Dr. Carl D. Camp, was so kind as to examine neurologically some twenty-five gynecologic patients from the Gynecologic Clinic of the University Hospital. All these patients complained of pain and tenderness in the lower abdomen and it was the purpose of the investigation to see if there was any relationship between these pelvic pains and tenderness and the neurological findings, the pelvic pathology being determined definitely in most instances through the operative procedures. The results of these examinations, as well as Dr. Camp's conclusions are most interesting. The patients showed all sorts of pelvic pathology, varying from slight pelvic adhesions to carcinoma of the uterus. In other cases, while there were pelvic symptoms there was no discoverable pelvic pathology. For the purposes of this paper it is not necessary to discuss the findings in detail but it is better

to give Dr. Camp's conclusion since they have a distinct bearing upon the subject under discussion. Dr. Camp's report is as follows: "Summarized report of the results of examinations of twenty-five cases for referred hyperesthesia. In all the cases 'with pathology' the results of the sensory examinations would appear to be fairly reliable as showing a pathological condition but there is nothing in the size or location of the areas which would give a definite clue to the nature of the pathological lesion or its location. There were some cases showing hyperesthesia but without pathology, and there were some cases with pathology but without hyperesthesia. The pathology in these latter cases, however, is apparently not inflammatory nor irritating. So far, I should say, that we have no findings which would indicate 'referred hyperesthesia' is of any value for the diagnosis of the pelvic disease."

In conclusion it may be said that the final word has not yet been said on this subject. As our clinical and pathological knowledge of neurological and gynecological conditions increases the better will become our ability to judge what this relationship is and to classify and aid our patients.

#### A BRIEF ANALYSIS OF THE NERVOUS SYMPTOMS ARISING IN THE FEMALE PELVIC ORGANS.\*

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GRAND RAPIDS, MICH.

Dr. Peterson has so well expressed the opinions of the gynecologist of today on this subject, and I agree with him so thoroughly, that I shall omit entirely the first part of the paper which I have prepared, and which would be largely a repetition of what he has already said.

I want, however, to say a few words further in regard to the neuroses. In the patients that come to us with manifestations of a functional nervous disorder we may as a rule recognize two main elements. The first of these is a condition of increased irritability, or what is commonly known as "nervousness." We find first that the reflexes are quickened, exaggerated, and less well co-ordinated. Secondly, the patient is more sensitive than normal to pain and all sensory impressions. Thirdly, her emotions are more easily excited, she is timid, over anxious and irritable; fourthly, she is subject to various functional disturbances such as those of digestion, menstruation and urination. It is difficult

\*Read as a part of a symposium at the meeting of the Michigan State Medical Society, Houghton, Mich., Aug. 16, 1914.



to say how much the exaggerated emotions enter into these latter disturbances, and how much the increased irritability. What Cannon has said in his recent work on the effect of fear, hunger, and anger upon the functions, is full of suggestion to the clinician, and well worth reading.

There are numerous causes for this increased irritability which we may conveniently group as follows:

1. Certain drugs, such as caffeine, nicotine and strychnine.

2. The action of certain ductless glands, the overactive thyroid, for example, and the ovary during menstruation and at the menopause.

3. We have a condition commonly known as intestinal stasis or intoxication that is associated with certain digestive disturbances. I do not wish to discuss here the nature of this condition, but simply to say that with it we often find a marked increase of irritability.

4. Prolonged fatigue is a very common cause to be remembered. It is, of course, the result directly or indirectly of many influences, but whatever this influence, it results in increased irritability.

5. Close application of the intellectual faculties, pain, and ungratified sexual desire are frequent causes, and there are undoubtedly others which we might place in this group.

6. There is one cause of which I have not spoken, and which I have left to the last because I think it is the most important of all and is often overlooked. I refer to the manner of thinking. (what the Germans call the "Denkweise") of the neurotic individual, the constant dwelling on the same subject, the mental uncertainty and confusion. The frequent emotional disturbances of these individuals leads to greatly increased irritability, and is the reason why some individuals under physical conditions that are apparently conducive to good health, and seemingly with all harmful mental influences removed, fail to improve, or do so very slowly. Neurologists have taught us to more clearly recognize this cause.

Now we commonly have more than one of these causes enumerated above present in the same patient, and for those of us who are not neurologists they are frequently hard to differentiate. They occur frequently enough, however, in isolated form that they may be mentioned separately.

Why should one distinguish this element of increased irritability so clearly from the second one which I am to mention? First, because a

large proportion of nervously disturbed patients that come to us are suffering practically from this element alone and, strictly speaking, should not be called "neurotic." Secondly, our neurologists do not commonly designate as "neurotic" those patients suffering simply from this increased irritability (or simply nervousness). The failure on our part to recognize this has frequently led us to misjudge some of their teachings.

The second great element in these patients is their underlying mental make-up. Now, each one of us is a result mentally of two factors—heredity and environment. It is largely a matter of opinion as to which is the more important, but the point I wish to emphasize is that when maturity has been reached we remain practically fixed in that mental make-up, and go through life with but little change. Our way of thinking, and our emotional natures remain about the same.

We must ever bear in mind that there is no sharp line to be drawn between the so-called normal and the so-called neurotic individual. We all of us in many respects are strong and firm. We likewise are each of us sensitive to various mental trauma in different degree, the shock or strain that seriously affects one person does not another. For example, the knowledge that he has syphilis produces a most marked anxiety and depression in one patient, with another there is apparent indifference. We may be sensitive to a few such influences or to many. When a person is far more sensitive than the average, we speak of him as being "neurotic," when not, as "normal," and it is with this understanding that I wish to use these terms.

Now, what are the characteristics that distinguish individuals with a neurotic mind from those that we call normal? In the first place, they possess a striking lack of moral courage or fortitude, an inability to meet stress or shock with equanimity. We observe also a marked lack of adaptability to environment in such patients, which if not the same is at least closely allied to a lack of fortitude. They are unable to fit themselves readily into the life which they are called upon to lead. This feature is so marked that the neuroses have often been defined as a "lack of adaptability to environment." Secondly, we notice that these patients are more emotional than others. Thirdly, suggestibility is increased in greater or lesser degree, particularly in the class that we choose to call hysterical. Fourth, their manner of thinking is not normal. This feature interests

us especially in considering the matter of physical disease.

Of the ideas that reach our minds it is principally those that affect our interests that are long harboured there. They are disposed of in one of three ways: they are acted upon, the action is taken out in fancy, or they are dismissed without either. Unpleasant ideas that affect our interests take one of these three courses, and are dispatched with a certain degree of promptitude. Not so with the neurotic mind. Such unpleasant ideas remain there, they become exaggerated and distorted, and if carried long enough become fixed ideas, obsessions, or phobias.

A patient with a fundamentally neurotic mind develops symptoms from a number of *direct* causes, aside from the predisposing increased irritability already discussed. We may divide them for convenience into two groups, one of acute causes, and one of more constant ones. Among the acute causes might be mentioned any sudden shock, such as the loss of a near relative, a financial loss, a railroad accident, or a surgical operation. Among the more chronic causes may be mentioned (first) a lack of suitable work. Those of you who have not read Cabot's "What Men Live By" should do so. He puts much stress upon this cause of instability. Of great importance also is (second) the element of recreation; without it responsibilities weigh heavily, a sense of proportion is lost, life becomes too serious, and strain results. Another cause (third) we find in disturbances of their sexual life. I am using the term in a broad sense. A disappointment in a love affair, inattentiveness (imagined or otherwise) on the part of the husband, jealousy, sterility, and the non-gratification of the maternal instinct, all come under this general head, and are active, potent causes for the development of nervous symptoms in the neurotic individual. This is here merely a recognition of a most important cause, the limitations of which are yet undefined. Under a fourth head may be placed all sorts of shortcomings, sins, or crimes, resulting in conflicts between ideals or conscience, and a knowledge of our actual behavior. The disturbance caused is only in a very general way proportionate to such actual shortcomings, sins, or crimes, but far more so to the particular sensitiveness (or conscience) of the individual. A housewife may become more disturbed over the neglect of some trivial household duty than some individuals would over a serious crime. The same principle applies to the matter of physical disease, and this brings

us more nearly to our subject. The amount of concern or anxiety displayed by a patient over her condition is only in a very general way proportionate to the importance of the physical abnormality, but is closely related to the fear or antipathy that the patient may have for that particular disease or condition. And so it is, for example, that we find a patient oftentimes far more disturbed over some slight disturbance in menstruation than others would be over the presence of a fibroid or carcinoma.

Let us say, for example, that a patient's attention has been directed to the pelvis by something which she believes to be a sign of disease there, it may be pain, disturbance of function, or something which she feels and thinks may be a growth. When she has become sufficiently concerned she goes to a physician for relief. It is most important that we bear in mind that it is her concern in regard to herself that is the immediate cause of her coming, and that this in no way reflects the seriousness of the physical condition. We take her history, we make a careful examination of her pelvis to find, if we can, an adequate cause for her complaint. When we find that symptoms and disease correspond we are satisfied, and advise and treat her accordingly. Granting that even the most expert will occasionally overlook or be unable to discover the existing physical cause of the trouble, it is nevertheless true that the physician who is familiar with this field of work will almost always be able to discover it if it exists. It happens, however, very frequently, that marked discrepancies exist between the symptoms that are enumerated to us and the actual condition that we find in the pelvis. Either the pelvic organs and their functions are found to be normal, or the physical condition, only slightly abnormal, does not give us adequate reason for her complaint. After assuring ourselves that other physical conditions may be eliminated, we must turn to her nervous system for the reason, and this examination should be as thorough as our present knowledge of such matters permit. The expert neurologist will naturally be able to make a more accurate estimate of a patient's nervous condition than we, but I believe it is usually possible for any of us to determine whether we are dealing with a disease of the pelvis, or a functional one of the central nervous system, or perhaps both.

Pelvic disturbances of nervous origin fall naturally into 3 divisions: sensory, muscular and secretory. Of the three the sensory disturbance are the most important. I think we may safely ascribe some of the milder degrees of pain and



discomfort in the pelvis to increased irritability, but when such become exaggerated we may look for the cause in a disturbed mental condition, a general conception of which I have ventured to give you earlier in this paper.

Muscular disturbances are best illustrated by vaginismus. The trouble is purely a mental one. Fear of being hurt, antipathy for the husband, or fear of pregnancy, cause a marked increase in the psychic reflex controlling the striped musculature of the pelvic outlet, and spasm occurs sometimes even before any object has touched the vulva. Increased irritability is usually responsible for the increased frequency of urination occurring in nervous patients, and this element is apparent in some cases of dysmenorrhea. Into both of these latter troubles a mental element is also frequently apparent.

The secretion from the Bartholinian glands is perhaps the only true secretion in this region that we find affected by mental behavior. Menstruation, though perhaps not to be placed under the head of secretions, is markedly influenced by the nervous system.

Nothing really can be said of the simple leucorrhoeas not caused by infection or local disease, and which are so frequently found in women. I merely wish to point out that the increased flow of mucus is not caused by any disease of the lining of the vagina or uterus. We have no reason to believe that the nervous system has directly anything to do with it. I have tried here to give you a brief outline of important principles in the estimation of this class of cases; each patient will necessarily require individual investigation and study.

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### SURGICAL PROGNOSIS.\*

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This subject was suggested by the lectures of Sir James Paget on Risks of Operations and The Calamities of Surgery. They were delivered in 1867 and 1868 and mirrored the status of surgery fifty years ago. The influence of sex, age, acute disease, alcoholism and certain organic degeneracies were appreciated and the lecturer showed admirable insight into the essentials for successful surgery.

Since then through the discoveries of Pasteur, Lister and Koch and the work of Virchow, Senn, Price and a host of others, great progress has been made in diagnosis, surgical technic

and hospital efficiency and yet a study of the present situation discloses much of the fallibility that existed a half century ago.

Let me narrate a few cases. Some of them were my own. Others came under my notice.

A few days ago I was told of a man who had been transferred from a police station to a hospital. There were some evidences of alcoholism and the case was treated as such. The prognosis was not considered grave. The end came soon and abruptly. The coroner reported a broken neck as the cause of death.

Sometime ago a nearby physician was called to attend a woman with a painful knee. I do not know just how a diagnosis was arrived at but it was called gout and a strict diet imposed. Two days later the doctor telephoned around the corner to inquire how the patient was getting on and assured the attendant that by avoiding meat her patient would recover. By the aid of ether anesthesia I made out a transverse fracture of the femur near the knee.

Six weeks ago a dentist whom I treated several years before for alveolar disease brought a patient with a suspected similar affection. The patient said he had consulted four dentists and three physicians during the preceding two months and all had declared his mouth to be in good condition. He had been the victim of much dentistry. His right cheek was painful and tender, the gum was swollen and sore. X-ray examination showed decay of the root of a molar to which a long bridge was fixed, and there was also necrosis of the jaw. After removal of the bridge and the offending tooth the antrum was opened thoroughly and two drachms or more of foul smelling pus drained away.

Recently there was referred to me a patient with a small tumor on the lower jaw. The prognosis was grave. X-ray examination showed decay of an adjacent tooth and necrosis of the jaw. Microscopic examination of the tumor was reported negative. Recovery.

Several years ago a sophomore student consulted me for balanitis and phimosis. His general appearance was most healthy and some consideration was given to his professional attainments. A circumcision was advised preemptorily and done forthwith but the wound did not heal. Then the student informed me that sugar had been found in his urine while pursuing the course in urinalysis. Recovery followed appropriate treatment.

A few months ago a small child with empyema was prepared for thoractomy. Contrary to Holt's advice to do that operation on young

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children under local anesthesia that case was etherized and died on the table.

A year ago a man was admitted to the hospital with the history of an injury to his hip several weeks previous. X-ray examination showed dislocation. There was some shortening and slight deformity. Reduction under anesthesia was attempted without success. There was a fair degree of function and, as the patient was not in fit physical condition and was not a good operative risk, he was advised to be content. It was a compensation case. The patient was dissatisfied and his employer was anxious for full recovery. Operation was followed by sepsis and sepsis by death.

Nine months ago I was consulted by a woman, 50 years of age, for pain in the lower abdomen and pelvis, painful micturition and constipation. Her abdomen was large and nothing could be learned by palpation. Digital examination of the rectum revealed nothing. Catheterization of the bladder and urinalysis were also negative. By vaginal examination the cervix was located above the symphysis. A rather hard mass was felt posteriorly. Tumor of the uterus, probably fibroid, was diagnosed and operation with uncertain prognosis advised. A trained gynecologist concurred. A third consultant gave a diagnosis of cancer of the uterus and opposed operation. She entered the hospital for treatment. Abdominal incision showed the uterus to be retroverted but otherwise normal. A large mass was found posteriorly encasing the upper rectum. With the patient etherized the tumor could, with some difficulty, be felt by the finger through the anus, and a stricture was divulsed. Wassermann examination was negative. Microscopic examination of debris from the stricture disclosed a carcinomatous growth. The patient lived six months.

The foregoing citations present a variety of not uncommon cases in which the prognosis went wrong. It is important to know how such mistakes may be avoided. Let us consider the basis of prognosis.

Surgical prognosis is prejudgment of the course and termination of surgical disease. Obviously there can be no knowledge in advance concerning any disease the nature of which is not understood; nor can the finale be foretold unless the kind of treatment proposed and its results in similar cases be known. Surgical prognosis is founded therefore upon correct diagnosis and accurate knowledge of the effects of surgical treatment.

A correct diagnosis is the finding after a

careful and thorough examination. Such an examination should be both local and general. The lesion underlying all other phases of the disease is first investigated with the idea of determining its location, its nature and extent, its acute and emergency or chronic character. Both clinical and laboratory means and methods are to be employed. In some instances, as in the last case narrated, the exact nature of the lesion can not be diagnosed without anesthesia. In such cases the important thing to know is whether operation be necessary, and if needed, whether it be urgent. A perforating gun shot or stab wound of the abdomen would represent such an emergency case.

The general examination should show the temperature, pulse, blood pressure, heart condition, respiration, condition of the lungs, blood, urine, renal function in pertinent cases, presence or absence of nose, or throat disease, skin lesion if any, and any other existing condition which may in any manner influence the welfare of the patient. The employment of diagnostic instruments and expert advice especially of an internist should not be neglected wherever they may be of service.

Having arrived at a diagnosis the next step in the prognosis is a clear conception of the treatment, if any be indicated, whether it should be operative or non-operative and immediate or otherwise.

As one's experience grows it becomes evident that certain chronic cases will not improve with operation. This brings up a twofold test of operative treatment, namely, utility and safety. If an operation be of doubtful utility it had better be avoided. Sir James Paget put it this way: "If an operation is not purely and wholly for the good of the patient it should on no consideration whatever be done."

"Next," said Sir James, "Never decide upon an operation even of a trivial kind, without first examining the patient as to the risks of his life." If an operation be not within a fair margin of safety it is unwisely attempted. In making that statement I maintain that, in those emergency cases, in which operations are done at great risk, there is still a margin of safety because of the greater risk by withholding operative treatment. Such cases are those of internal hemorrhage, intestinal obstruction and brain compression due to injury.

Certain acute cases are urgent and delay is dangerous. Those mentioned above belong to this class. Others are perforations of the hollow viscera, acute appendicitis, peritonitis and spreading infections.



In those chronic cases in which there is no danger from reasonable delay more favorable prognosis will result from careful examination and preoperative treatment. Instead of twelve hours a period of two or three days may well be devoted to preparation. In handling those patients who are crippled by cardiac, renal, blood or other complicating organic diseases team work should be encouraged.

Operative technic and anesthesia both affect prognosis strongly but are too large subjects for extended consideration in this paper. Other things being equal the shorter the operation and the less handling of structures the more favorable the prognosis.

In regard to anesthesia the position seems tenable that the safety of the method compares with the expertness of the anesthetist.

Surgical patients should, in my opinion receive more post operative attention than treatment. Postoperative conditions can more easily be forestalled than corrected. Water administered subcutaneously or a la Murphy is usually more effective than hypodermic stimulation. Morphin reduces shock. Gastric lavage helps persistent vomiting. Care in the diet and rectal enemata simple or with the retained form will usually avoid distention.

A new form of preoperative treatment that has a strong bearing upon surgical prognosis is preventive surgery. It depends upon the education of the public and manifests itself in two ways. It is shown in mass form in the enactment of legislation which will minimize injuries in some cases by removing the causes of accidents and prevent surgical affections in other cases by eliminating infectious diseases.

Preventive surgery is also gaining headway slowly but steadily in the willingness of the laity to accept diagnosis at an earlier stage of the disease when treatment is simpler, safer and more effective.

## HOW MODERN SURGERY BEGAN.\*

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When your Secretary suggested that I read some paper "that I had read for some other occasion," I felt much flattered that I should be accorded such a privilege. When I ran over my meagre supply of formerly prepared papers, I found that most of them had not stood the test of time. It recalled what Dr. David Riesman, one of our clinical professors of Medicine

at Pennsylvania, used to tell us as students, "Write, write much, but do not publish, just yet. Keep your written efforts to look over periodically. You will learn much that way."

In casting about for a subject, I struck upon one which very recently in general reading had grasped my imagination so that I was compelled to ask myself the reason why. Then I had to debate further whether it would appeal to a group of men, most of whom are busy general practitioners. For it has to do with one of the many epoch-making periods of the history of medicine with which you are more or less familiar. Then I took it for granted that every physician, being a lover of his science, must also be interested in its history. The period was the sixteenth century in Europe, centered in France, with Ambrose Paré as the central towering figure.

A brief sketch for a setting of the man and his times:

Born in 1510 and living to 1590, the three chapters into which his career can be divided, saw France burdened with five different kings in many wars. But this is when the Modern World was born because the Renaissance was beginning to bear new knowledge, while old knowledge was being brought back. Though there were terrible years of struggling during the childhood of this rejuvenating world, they were heroic and glorious because men of vision were looking abroad, there was a groping change in politics and manner of living, and neglected science again was lifting her head. There was the new art of printing, Luther and the Reformation, Columbus and consequent discoveries, Lattimer and his revival of English as a language, Sylvius the Compiler of Knowledge, Vesalius of Padua, (Paré's contemporary), the Restorer of Anatomy, Malpighi, the demonstrator of cells as distinct entities, Linacre, founder of the Royal College of Physicians in London, student migrations to the Southern seats of learning, and many other men and events, the grouping of which is not mere coincidence, because, in reality, men were beginning to think.

You recall that there were three orders of medical practitioners. The physicians, who must know Latin, were debased by shedding blood. The surgeons, of the long robe, were colleagues of the learned physicians, and did the serious operations, like "cutting for stone," but were not allowed to prescribe drugs though they must know Latin. (Can you imagine any fee splitting in those days?) Then the lowly barber surgeons, were a heterogeneous lot,

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speaking only the vernacular, obtaining their rude training as apprentices in the shop, the hospital and battlefield and practicing in every degree from crown shaving to infringement of the prerogatives of the high and mighty surgeons. We might compare them to the large army of irregular quacks and exponents of isms, which we still have ever with us. The mass of physicians of the sixteenth century lived according to their dreary lights, and because they were ignorant of Anatomy, Physiology, and of the causes and nature of disease, they practiced monstrosously and did what damage they could.

Ambrose Pare was apprenticed to a barber-surgeon till he was 23 years of age in the Provinces. Then he went to Paris, and lived as an interne with the miserably crowded hordes in the dirty old smelly Hotel Dieu for three years. After that, in 1537, we find him at the age of 27, and hungry for more experience, attaching himself to the army of Francis I, about to invade Italy.

Until 1569, we see him in the second chapter of his career as a busy and hard-working army surgeon at a time when there was no organized medical corps, and the work was done by men attached to nobles and a horde of hangers-on, charletans, and quacks, who accepted what was given them and took what they could. As Pare remarks, "God knows they were hard put to it to dress the sick and wounded." But he had an enormous experience of a rough and ready kind, and well did he profit from his labors. It is this second chapter upon which I want to expatiate here.

But we must consider what constituted the third chapter so we can have our setting complete. After thirty-three years of the army and with short intervals in Paris, he took up his permanent residence there, and enjoyed his hard-earned honors, if being surgeon to men-ingitic, debauched, vicious and imbecilic kings, the spawn of the notorious Catharine de Medici, could be called honors. While Paris became foul from the blood of those sacrificed by both Huguenot and Romanist, the old surgeon, who himself had no creed, came and went unmolested, serving faithfully all men alike and was saved on St. Bartholomew's Day by the whim of the poor weakling Charles IX, the dupe of the Guises and his own mother.

I doubt if many of us could have long followed him in his daily routine from the time he rose in the morning at four o'clock to when he found his bed somewhere around midnight. He kept this up for years, teaching, operating, writing, encyclopedically, and never forgetting

for a day the advancement of his profession. And when 65 years old in 1575, Pare dedicated his collected works to Henry III, in this apparently boasting manner, "God is my witness, and men are not ignorant of it, that I have labored more than forty years to throw light on the art of Surgery and bring it to perfection. And in this labor, I have striven so hard to attain my end, that the ancients have naught wherein to excel us, save in the discovery of first principles; and posterity will not be able to surpass us, (be it said without malice or offense), save by some additions, such as are easily made to things already discovered." The old gentleman might be surprised today to find what these "additions" have been, but he gave us, who are "posterity," some of the "things already discovered," both from his own knowledge and from the "ancients," and made more easy the advances which were made by Harvey, Hunter, Laennec, Holmes, Lister, Pasteur, Koch, Schaudinn, Ehrlich, Wassermann, Wright, Gorgas, Carter, Osler, Murphy, Flexner, Nogouchi, and the many other great minds of our profession.

When Pare was come to the contemplative age of 75 years, he must needs reply to Gourmelen, (*mon petit maitre*), Dean of the Faculty of Medicine in Paris, who publicly denounced him because he used the ligature instead of the cautery in amputations. The answer was made by appeal to his successful experience, a narration of his military life, typifying that of the times, and illustrating the condition of surgery in the sixteenth century. In the extract which we hope we have happily chosen from these "Journeys in Diverse Places" to illustrate our text, we will endeavor to demonstrate the remarkable personality, vigor, and simple straight-forwardness of the author. He believed fully in the healing force of Nature, and his refrain, the same as he had written over the door of the Hotel Dieu where it can be seen to this day, was: "I dress the wound, God heals it."

Without preface, Pare begins his "Journeys in Diverse Places." "I will here show my readers the towns and places where I found a way to learn the art of surgery, for the better instruction of the young surgeon." In his first battle—"the enemy was forced to give ground and retreat into the castle which was captured by Captain LeRat—he received an arquebus shot in his right ankle and fell to the ground at once and then said 'Now they have got the Rat.' I dressed him and God healed him."

"Being come into the city, I entered into a



stable, thinking to lodge my horse, and found four dead soldiers, and three propped against the wall, and they neither saw, heard, nor spake. As I was looking at them with pity, there came an old soldier who asked me if there was any way to cure them. I said no. And then he went up to them and cut their throats, gently, and without ill will toward them."

After describing two days of carnage, Pare continues, (and this is where he made one of his two great contributions to surgery), "Now I was at this time a fresh-water soldier; I had not yet seen wounds made by gunshot at the first dressing. It is true I had read in John de Vigo, first book 'Of Wounds in General,' eighth chapter, that wounds made by firearms partake of venosity, by reason of the powder; and for their cure he bids you cauterize them with oil of elders sealding hot, mixed with a little treacle, (syrup). And to make no mistake, before I used the said oil, knowing this was to bring great pain to the patient, asked first before I applied it, what the other surgeons did for the first dressing; which was to put the said oil, boiling well, into the wounds, with tents and setons; wherefore, I took courage to do as they did. At last my oil ran short, and I was forced thereof instead to apply a digestive of the yolk of eggs, oil of roses, and turpentine. In the night, I could not sleep in quiet, fearing some default in my cauterizing, that I should find the wounded to whom I had not used the said oil dead from the poison of their wounds; which made me rise very early to visit them, where beyond my expectations, I found that those to whom I had applied my digestive medicament had but little pain, and their wounds without inflammation or swelling, having rested fairly well all that night; the others, to whom the boiling oil was used, I found feverish, with great pain and swelling about the edges of their wounds. Then I resolved never more to burn, thus cruelly, poor men with gunshot wounds."

As a corollary to this epoch-making incident, Pare speaks of a surgeon at Turin "famed above all others for his treatment of gunshot wounds" with a secret "balm." "And he made me pay my court to him for two years before I could possibly draw the recipe from him. In the end, thanks to my gifts and presents, he gave it to me; which was to boil, in oil of lilies, young whelps just born, and earth-worms prepared with venetian turpentine. Then I was joyful and my heart made glad, that I had understood his remedy, which was like that which I had obtained by chance. See how I learned to treat

gunshot wounds! Not by books, *mon petite maistre*."

That anecdote—the trying experience and sane conclusion—are characteristic of Pare. He drew his own conclusion and acted on conviction, and in that he differed from all practitioners of his time. He dared greatly, for he lived in an age of conservative authority. He was one of the foremost clinical surgeons in our annals. And regarding this particular story of the boiling oil, so modestly told, let us observe this: that the simplified wound treatment for gunshot injuries, then introduced, was one of Pare's great contributions to surgery—perhaps his greatest. After Pare torturing of wounded men, put men in ill repute. We can understand from this what was meant when relating the sufferings of a group of wounded. "You, *mon petit maistre*, would have been torn to pieces had you used the hot iron." So let us note as his first important contribution to surgery, the simplified treatment of gunshot wounds.

Now in the year 1552, when Henry II had come to the throne—"he besieged the German camp at Danvilliers—so they had a good shot at our men. There was a culverin-shot pass through the tent of M. de Rohan, which hit a gentleman's leg. I had to finish the cutting off of it, which I did without applying the hot irons." Without using direct words to say so, Pare did tie the vessels with linen threads.

Though given the credit, really, in truth, he never claimed that he had invented the ligature. The Roman Galen used it to control hemorrhage from wounds. But strangely enough, the thought of controlling hemorrhage from amputation wounds seems to have occurred to none until Pare in the middle of the sixteenth century. This may have been the germaine idea from which premeditated, (sometimes meddling), surgery grew some three hundred years later when anesthesia and antiseptics were discovered in the great nineteenth century.

The incident has been depicted, you know, in a celebrated painting of the great surgeon on the battlefield, surrounded by prancing horses, stately pavilions, and pompous-looking officers, as he amputates the leg of an anxious soldier, who sits stroking his long beard and gazing at the stump, while Pare waves aside the hissing cautery and applies a linen ligature to the bleeding artery. Was that a notable feat? It marked an era in surgical history and taken with the simplified method of treatment of wounds from gunshot, and in general, it inaugurated a new conception of surgery. Hither-

to an art barbarous and cruel, it had now become beneficent and humane.

One more incident to illustrate what a heart and head this man had developed to go about his work deftly, silently, effectively; how he could soothe pain, encourage sleep, apply dressings, bandages, and splints; and because he took cognizance of the healing forces of nature, he appreciated the value and limitations of food and stimulants, of clear air, and fresh linen.

It was in 1569 when his military career of thirty-three years was drawing to a close and he was surgeon to the King, that he was bade to go to M. Le Marquis d' Auret, "who had received a gunshot wound near the knee, with fracture of the bone, about seven months ago."

"I found him in a high fever, his eyes sunken, (see this typical picture of sepsis), with a moribund and yellowish face, his tongue dry and parched, and the whole body much wasted and lean, the voice low as of a man very near death; and I found his thigh much inflamed, suppurating, and ulcerated, discharging a greenish, (pyocyanous), and very offensive, (colon bacillus), sanies. I probed it with a silver probe, wherewith I found a large cavity in the middle of the thigh, and others round the knee, sanious and cuniculate; also several scales of bone, some loose, others not. The leg was greatly swelled and imbued with a pituitous humor \* \* \* \* \* and bent and drawn back. There was a large bed sore; he could rest neither day or night; and had no appetite to eat, but very thirsty. I was told he often fell into a faintness of the heart, and sometimes as in epilepsy; and often he felt sick, with such trembling that he could not carry his hands to his mouth. Seeing and considering all these great complications \* \* \* \* \* truly I was sorry I had come to him. All the same, to give him courage and good hope, I told him I would soon set him on his legs by the Grace of God, and the help of his physicians and surgeons, (as Sir William Osler would call them 'useful supernumeraries')."

"Having seen him, I went a walk in a garden, and prayed God to show me his grace \* \* \* \* \* to fight such a complication of diseases. They called me to dinner. I came into the kitchen, and there I saw, taken out of a great pot, half a sheep, a quarter of veal, three great pieces of beef, two fowls and a very big piece of bacon, with abundance of good herbs; and then I said to myself that the broth of the pot would be full of juices, and very nourishing.

"After dinner, we began our consultation, all the physicians and surgeons together \* \* \* \* \*

I began to say to the surgeons that I was astonished that they had not made incisions in M. le Marquis's thigh, seeing it was all suppurating, and the thick matter in it very fetid and offensive, showing that it had long been pent up there; and that I had found with the probe caries of the bone, and scales of bone, which were already loose. They answered me: 'Never would he consent to it,' indeed it was near two months since they had been able to get leave to put clean sheets on his bed; and one dared scarce touch the coverlet, so great was his pain. Then I said: 'To heal him, we must touch something else than the coverlet of his bed.'

"To restore the warmth and nourishment of the body, general frictions must be made with hot cloths, above, below, to right, to left, and around, to draw the blood and vital spirits from within outward, (fomentations), \* \* \* \* \* for the bed sore, he must be put in a fresh, soft bed, with clean shirt and sheets. \* \* \* \* \* Having discoursed of the causes, and complications of his malady, I said we must cure them by their contraries; and must first ease the pain, making openings in the thigh to let out the matter. \* \* \* \* \* Secondly, having regard to the great swelling and coldness of the limb, we must apply hot bricks around it, and sprinkle them with a decoction of nerval herbs in wine and vinegar, and wrap them in napkins; and to his feet an earthenware bottle filled with the decoction corked, and wrapped in cloths. (See the superstition of innate qualities). Then the thigh and the whole of the leg must be fomented with a decoction of sage, rosemary, thyme, lavender, flowers of chamomile, and melilot, red roses boiled in white wine, with a drying powder made of oak-ashes and a little vinegar, and a half a handful of salt, (sounds like some of the patent remedies we read about in the papers these days). \* \* \* \* \* Thirdly, we must apply to the bed sore a large plaster made of the desiccative red ointment and of Unguentum comitissae, equal parts, mixed together, to ease his pain and dry the ulcer; and he must have a pillow of down to keep all pressure off it \* \* \* And for the strengthening of his heart, we must apply over it a refrigerant of oil of water lilies, ointment of roses, and a little saffron, dissolved in rose-vinegar and treacle, spread on a piece of red cloth. For the syncope, from exhaustion of the natural forces, troubling the brain, he must have good nourishment full of juices, as raw eggs, plums, stewed in wine and sugar, broth of the meat of the great pot \* \* \* \* \* the white meat of fowls, partridges' wings minced small and other roast meats easy to digest,



as veal, kid, pigeons, partridges, thrushes, and the like with sauce of orange, verjuice, sorrel, sharp pomegranates; or he may have them boiled with good herbs, as lettuce, purslain, chicory, bugloss, marigold, and the like. At night he can take barley-water with juice of sorrel and of water-lilies, of each two ounces, with four or five grains of opium, with the four cold seeds crushed, of each half an ounce; which is a good nourishing remedy and will make him sleep. His bread to be farmhouse bread neither too stale nor too fresh. For the great pain in his head, his hair must be cut, and his head rubbed with rose-vinegar just warm, and a double cloth steeped in it and put there; also a forehead cloth of oil of roses and water-lilies and poppies, and a little opium and rose-vinegar with a little camphor, and changed from time to time. Moreover, we must allow him to smell flowers of henbane and water-lilies, bruised with vinegar and rose-water, with a little camphor, all wrapped in a handkerchief, to be held sometimes to his nose. \* \* \* \* \* And we must make artificial rain, pouring water from some high place into a cauldron, that he may hear the sound of it; by which means sleep shall be provoked on him. As for the contraction of his leg, there is hope of righting it when we have let out the pus, and other humors, pent up in the thigh, and have rubbed the whole knee with ointment of mallows, and oil of lilies, and a little eau-de-vie, and wrapped it in black wool with the grease left in it; and if we put under

the knee a feather pillow doubled, little by little we shall straighten out the leg. \* \* \* \* \* This, my discourse \* \* \* \* \*.”

“The consultation ended, we went back to the patient and I made three openings in his thigh \* \* Two or three hours, I got a bed made near his old one, with fair white sheets on it; then a strong man to put him in it, and he was thankful to be taken out of his foul stinking bed. Soon after, he asked to sleep; which he did for near four hours \* \* \* \* \*.”

“The following days, I made injections into the depths and cavities of the ulcers, or Aegup-tiacum dissolved sometimes in eau-de-vie, other times in wine. I applied compresses to the bottom of the sinus tracks, to cleanse and dry the soft spongy flesh, and hollow leaden tents, that the sanies might always have a way out; and above them a large plaster of Diacalcithea dissolved in wine. And I bandaged him so skillfully that he had no pain; and when the pain was gone, the fever began to at once abate. Then I gave him wine to drink, moderately tempered with water. \* \* \* In one month I got him into a chair \* \* \* \* \* and in six weeks to stand a little on crutches \* \* \* \* \*.”

Do we today deal with an infection much differently? This was written at the end of a long busy life, whose enormous experience lent force to his descriptions, conclusions, and advice. When I rose from the reading, I was convinced that here indeed was a man.

# *52nd Annual Meeting*

*Battle Creek*

*Calhoun County*

*September 4-5-6  
1917*

# TRANSACTIONS

## OF THE

### Clinical Society of the University of Michigan

Stated Meeting, November 7, 1916

The President, CARL D. CAMP, M.D., in the Chair  
Reported by REUBEN PETERSON, M.D., Secretary

(a). A CASE OF A DIABETIC WITH UMBILICAL HERNIA, COMPLETE LACERATION OF THE PERINEUM, AND FISTULOUS OPENINGS IN THE REGION OF THE RIGHT LABIUM.

(b). A CASE ILLUSTRATING THE ADVANTAGES OF THE REMOVAL OF OVARIAN CYSTIC GROWTHS WITHOUT ASPIRATION.

REUBEN PETERSON, M.D.

(From the Obstetric and Gynecologic Clinic, University Hospital, Ann Arbor, Michigan).

(a). *A Case of a Diabetic with Umbilical Hernia, Complete Laceration of the Perineum, and Fistulous Openings in the Region of the Right Labium.*

This patient is 53 years of age and married. The family history is negative. She has always had good health until a short time ago when she began to have pains in her back and hips which she thought were rheumatic. Her menstruation began at the age of 10 and was regular until her marriage at the age of 17. After the birth of her first child she did not flow for ten years and became very fleshy. She passed through the menopause five years ago. Her first two children were stillborn and she was lacerated into the rectum at the first confinement. She had inflammation of the womb at this time for four or five months and has had incontinence of feces ever since.

She comes to the Hospital for a tumor at the navel, an abscess of the right labium and inability to control the bowel movements. Lately her womb has come down so that at times she can see it. About twenty-three years ago, while carrying a child, a small tumor developed at the navel and has gradually grown larger. Six

weeks ago an ulcer formed on the top of this tumor, but except for this, there are no other symptoms, not even pain. Last July she developed an abscess on the right side of the external genitals which broke and discharged a lot of foul pus. The discharge has decreased and now is composed of blood with very little pus.

Examination shows the patient to be of large frame and well nourished. The abdomen is negative throughout except for a mass the size of a coconut which protrudes through an umbilical opening two inches in diameter. (Fig. 1.) About one-third of the upper surface of the hernia is covered by a skin slough, which is separating at the edges. The mass is soft, dull on percussion and cannot be reduced through the hernial ring.

In the upper and outer side of the right labium majus is a brownish, indurated area, in the center of which are two small fistulous openings discharging a thin purulent, bloody fluid. Another indurated area and another fistulous tract lie between the labium and the crease of the thigh. The cervix prolapses through the vulvar opening when the patient strains, the external os being bathed in fecal matter coming from the anal opening which has been torn through the sphincter and some two inches up the bowel.

The ulceration of the skin about the hernial mass is unusual in my experience. The hernia is not strangulated and there is no particular tension to account for the sloughing. In all probability no bowel is in the protrusion since it is dull on percussion and therefore probably the sac contains adherent omentum. In my opinion, since there is no history of trauma in connection with this hernia, the necrosis is probably due to a general condition, diabetes,



which an examination of the urine showed the patient to be suffering from.

In fact I selected this case tonight not because of the umbilical hernia which is not uncommon, nor on account of the complete rupture of the perineum or prolapse of the uterus, conditions which are too frequently met with in the Clinic, not even for the abscess in the external genitals which is rather uncommon. I report the case not because of these surgical conditions, any one of which demands operation, but to elicit a discussion of whether any operation is justifiable on this patient who is suffering from diabetes. Fortunately we have with

greater danger to life from operating in an advanced case of diabetes. During the past twenty-five years I have erred by not realizing the dangers of operating upon patients with apparently mild cases of diabetes.

In any case, if Dr. Foster says it is safe to operate I shall try to relieve the patient of the suppurating areas in the external genitals and postpone the operations for the other surgical conditions to a later date.

NOTE. About ten days after the demonstration of this patient before the Society, with Dr. Foster's sanction, under ether the fistulous tracts in the right labium and groin were opened



Fig. 1. Large umbilical omental hernia with areas of skin sloughing, due to a diabetic condition.

us a man who is particularly interested in diabetes, and who is in a position to tell us surgeons when and when not to operate on diabetic patients. So I shall leave the discussion of the diabetic condition to Dr. Foster.

There is a great responsibility resting upon the surgeon in regard to operations upon diabetics and in elective operations such as this patient would have. The internist should be called in wherever possible. The patient has had the umbilical hernia and the ruptured perineum for a long time and really does not come to the Hospital for the relief of these conditions so much as to be cured of the fistulous tracts in the external genitals. Even this latter condition possibly could be endured if there was

up and a considerable amount of dark, unhealthy granulation tissue removed. The exposed areas were then packed with gauze. Altogether the patient was not under ether more than fifteen minutes.

The patient did badly from the time of the operation until her death twenty-seven days later. The everted area never showed any signs of healing. Two weeks after the operation signs of inflammation appeared in the suprapubic fat fold where the skin became brawny, indurated and reddened. The area spread to the flanks where the skin became necrotic in places. Finally the patient became stuporous with the pulse and temperature markedly elevated until death.

Autopsy showed in addition to the labial abscess, extensive inflammation of the abdominal wall even involving the pubic bone.

Inasmuch as death was due to the diabetic condition, Dr. Foster has been asked to append a note of explanation to his discussion of the case.

(b). *A Case Illustrating the Advantages of the Removal of Ovarian Cystic Growths Without Aspiration.*

The second case I wish to report is that of a

gastrium by a growth for the most part cystic, although in places denser portions can be felt. (Fig. 2). The tumor rises almost perpendicular from the pubes, reaches its highest point at the umbilicus and slopes evenly to the ribs and flanks. The diagnosis of a multilocular ovarian cyst is borne out by palpation and percussion and confirmed by the results of vaginal examination.

October 20, 1916, the abdomen was opened by a median incision, 15 inches long, reaching



Fig. 2. Large multilocular cystadenoma of the ovary, weighing 24 pounds, removed without aspiration through a long median incision.

woman of 49, who comes to the Hospital for an abdominal tumor which she first noticed about a year and a half ago. When first observed it was in the median line and has gradually grown until now she is short of breath and has distress in the epigastrium. At times she has pain and is unable to sleep. During the last few months she has lost twenty pounds and is much weaker than she was a few weeks ago.

Examination shows the patient to be of average build and not emaciated. The abdomen is markedly distended from the pubes to the epi-

from the pubes to several inches above the umbilicus. A large multilocular cyst of the left ovary was delivered through this long incision, the moderately long and thick pedicle clamped, and the cyst removed without rupture. The other details of the operation need not be gone into. The patient was not shocked by the operation, made an uninterrupted recovery and left the Hospital well. At this time the incision measured only five and three-fourths inches so much had the distended abdominal wall contracted. The tumor weighed twenty-four pounds,



was an ordinary multilocular cystadenoma without any signs of malignancy.

I wish particularly to discuss the method of operating adopted in this case; in fact this is the reason for the report. The incision employed was rather a startling one and should not have been used unless something was to be gained by it, since undoubtedly, beyond a certain length, the larger the incision the more is the danger of subsequent hernia. The reason for the long incision employed in this Clinic for the past two or three years for the removal of large ovarian growths is for the purpose of protecting the uncontaminated peritoneum from the contents of the growths, since through the long incisions the cystic growths can be removed intact. We believe that the old method advocated for so many years of a small abdominal incision and aspiration of the contents of the cyst is an unscientific procedure and is a relic of the past when a small incision, because of the dangers of infection, was less dangerous than a large one. It is not true as, stated in the textbooks, that a cyst can, as a rule, be aspirated and the peritoneum be uncontaminated. In 1913, Bland called attention to the reasons for removing ovarian growths intact and these reasons seemed so logical that since that time I have made the incision large enough to remove the growth without aspiration.

If, then, there be a probability of contaminating the peritoneum through aspiration of the cyst contents, we are in duty bound to remove the cyst intact because we can not tell beforehand whether the cyst be malignant or not. Careful microscopic examination of ovarian growths shows that nearly 50 per cent. are malignant. Hence we should be careful not to contaminate the peritoneum with a fluid which may give rise to malignant metastases through transplantation. At least, we ought to use the same, if not extra, precautions here against transplantation that we do in removing a cancerous uterus or a cancerous breast.

It will not always be found possible to remove large cysts intact even with the longest incisions. Thin walled cysts adherent to the abdominal wall and intraabdominal organs may rupture during removal even with the greatest care. However, these are the exceptions, not the rule.

#### DISCUSSION.

DR. NELLIS B. FOSTER: The case that Dr. Peterson has presented is very interesting from two points of view. Is the glucosuria due to an infection, or is it an infection in a diabetic? There are a few individuals apparently predisposed to develop in consequence of an infection, a spontaneous glucosuria. This is particularly prone to be the case with

gynecologic infections; there develops in consequence of some infection of the genital tract, a glucosuria. It is an interesting fact but is of no particular use to us because we cannot differentiate such cases from individuals who are primarily diabetic unless there is a history of diabetes previous to the infection. The only thing that will clear up the case which Dr. Peterson has presented is to observe her after she has been operated upon and find out whether she can return to a normal diet without glucosuria. That is one point to be borne in mind. If that is not the case, then she is a diabetic with a surgical condition which should be operated upon. There arises then the question when can an operation be undertaken on a diabetic individual, or what are the conditions which must be fulfilled in order that operation may be conducted safely? Surgeons quite properly fear to operate upon diabetic patients. The reason is that older individuals who have diabetes and develop some condition which is surgical are apt in the first place to develop infections following the operation. They are more prone to infections than ordinary individuals are. When an infection occurs in a wound in a diabetic individual it is very apt to go on to a stage of necrosis which we call gangrene. In the younger individuals an operation is very prone to be the beginning of a severe acidosis if acidosis is not already established and many of these patients die in coma. So we have two dangers, infection and coma in two quite different classes of patients. The reason for the danger of infection is perfectly evident if one stops to think what the diabetic state really is. Sugar appears in his urine on account of an increase of sugar in his blood. On account of the increase of sugar in his blood we have an ideal culture medium. The pyogenic cocci will not grow in cultures without sugar. They grow best in a considerable amount of sugar. The average per cent. of sugar in normal blood is .08 to .15. The mild diabetic has a blood sugar of .18 to .22 and above. Then there is another source of danger that we are apt to overlook. If an individual has a moderate degree of nephritis his kidney becomes less permeable to sugar as well as to other substances. So that you may find now and then a diabetic without any sugar in his urine. I recall very distinctly a case in point which is worth mentioning. A surgeon operated upon a person apparently in fairly good health. The operation was an appendectomy. The wound was not infected apparently but it refused to heal. It was gray and began to slough. The case was in the hospital and I had opportunity to see the patient. On taking a very careful history one learned that some fifteen years before sugar had been detected in the urine for a couple of weeks at a time and then it disappeared. That led us to make an examination for blood sugar. We found that this individual had in spite of a low diet, a blood sugar of .24 per cent., practically double the normal. By suitable diet the blood sugar was brought to normal and the wound healed promptly. Often as soon as the blood sugar crosses the normal line you can see in twenty-four or forty-eight hours a difference in the appearance of the wound.

This patient Dr. Peterson has transferred to us with the question, can the patient be operated upon? Not at the time when she was first seen, surely. How can we render her a safe operative risk? It

is simply a point of reducing the blood sugar until it is near normal and that can be done by diet. She represents a case of mild diabetes. Upon a slight diet restriction the sugar disappeared from the urine and today her blood sugar is .15 per cent. which is the high normal. In three days more she will be a perfectly safe operative risk.

With cases such as this one of Dr. Peterson's there is seldom any difficulty in effecting such control of the diabetes that one can almost guarantee a good surgical result. It is never safe in my opinion, to attempt a surgical operation so long as there is sugar in the urine and it is hazardous when the blood sugar is high even though there may be no glucosuria.

There is one class of surgical complication in mild diabetes which is very difficult to handle. I refer to infections of the cellulitis type. Much depends of course on the virulence of the invading organism but when with a diabetic whose disease has been of a mild type this complication occurs the diabetes seems at once to become severe. I have seen fasting attempted under these circumstances with no effect on the glucosuria and the rapid development of grave acidosis. These patients frequently die in coma. Here the surgical treatment is of primary consideration and the infected area must be opened freely.\*

Diabetic patients are liable of course to the same surgical disorders as the rest of us and the question that confronts a surgeon under these circumstances is when can he operate with relative safety and when is the risk prohibitive. I have already said that with any case there is danger so long as there is glucosuria. With younger patients acidosis is even a more serious factor for consideration. The best test, quickly applied, is an estimation of the alkali reserve in the blood. If this can not be done then one must know the amount of ammonia excreted in the urine, which is also a test of the degree of acidosis. If the ammonia is near four grams for twenty-four hours then an operation would almost surely precipitate diabetic coma. With one gram of ammonia there is no prohibitive risk but above two grams a surgeon should operate only in an emergency and a very high degree of skill would be required during the postoperative period to control the acidosis.

Surgeons have a well founded timidity about operations on diabetic patients. A diabetic can usually be treated so that the risk of an operation is not great, but it demands no little study in each case and some knowledge of metabolism; and this preliminary treatment is impossible outside of hospitals equipped with laboratories for precise chemical estimation.

\*Note. The patient who was the subject for this discussion died without sugar returning in the urine, and the blood sugar remaining within normal limits. The autopsy revealed that the infected areas were much deeper and more extensive than were indicated during life. Since suppurative areas appeared after the first operation it is presumable that extension occurred, probably from the bone focus into the abdominal muscles. The age and general condition secondary to long standing diabetes of course favored this. With infection so extensive as this was shown to be at the autopsy, recovery would not be expected in a subject of any chronic disease.

## A CASE OF TRANSVERSE MYELITIS OF THE CERVICAL REGION OF THE CORD.

ALBERT M. BARRETT, M.D.

(From the Psychiatric Clinic, University Hospital, Ann Arbor, Michigan).

The case is that of a girl 15 years of age who was admitted to the Psychopathic Hospital on September 1, 1916.

She came of a family of unusually bad nervous and mental constitution. Her father and grandfather had both been insane and the mother was of low mental development. There were eight other children in the family, all of whom were regarded as being mentally backward.

As a child, our patient had been sickly and backward in both physical and mental development. Menstruation first appeared at the age of 14, and from that time on she was irritable and complaining. At the age of 15 she had only reached the fourth grade in school. Following the death of her father, family circumstances made it necessary to arrange for the care of the children and on account of the very apparent mental backwardness of our patient she was sent to this institution.

The physical examination showed little that was pathologic. The thyroid was a little enlarged. There was no enlargement of the cervical or inguinal glands. The lungs showed no abnormalities on examination. The heart was not enlarged and the valvular sounds were normal. There were complaints of pain and tenderness in both inguinal regions and on pressure this became increased. There was some tenderness over the roots at the sixth dorsal and first lumbar vertebrae.

Neurologic examination showed keen sensibility to touch, pain and temperature throughout the body. All of the tendon reflexes were normal in their reaction. Aside from fine tremors of the fingers and tongue, the neurologic examination was entirely normal.

The important psychiatric condition present was a low grade of mental development. The Yerkes-Bridges point scale examination showed her to have a mental age of but eight years.

There was little further of interest in the patient aside from occasional complaints in the left iliac region, until Sept. 15 when she complained of headache, epigastric distress, and stiffness of the neck. Constipation was marked, there having been no bowel movements for four days. In the afternoon her temperature rose to 101.4°. On the 16th the temperature, early in the morning, was 99.5° and it continued moderately high during the day, reaching 104°



in the afternoon. Bathing did not reduce the temperature. She complained much of soreness in the neck. The cervical trapezius was in a state of tonic contraction. The head was somewhat retracted and the back stiff. Late in the afternoon it was impossible to flex the neck. The knee jerks could not be obtained. There was no Clonus, Babinski or Kernig's sign. Nowhere was there any muscular paralysis. A lumbar puncture at this time showed increased pressure. The fluid was clear and there were eleven cells per cubic millimeter. The globulin was not increased. The Wassermann reaction was negative. The colloidal gold test of Lange gave a slight change in color in the first four tubes. There was a leucocytosis of the blood of 14,700. She was referred to the Department of Otolaryngology, which reported that there was pharyngitis and septic tonsils, but not enough to warrant the symptoms. On the 18th there was a complaint of a feeling of stiffness in the legs. There was a marked diminution of the power of the muscles of the legs. Babinski reflex could be occasionally obtained but was soon exhausted.

On the 19th there was a general agreement that the condition present was a transverse myelitis of the cervical region, but of undetermined etiology. On this date she was transferred to the Department of Internal Medicine.

Abstracts of the notes made in that department are embodied in the following comments: During the 19th her temperature continued high; during the evening it reached  $105^{\circ}$ , the pulse was around 120, and the respirations were about 35. Generally, she was clear in her comprehension but somewhat stuporous. The pupils were small, equal, and reacted poorly to light. Extraocular movements were normal. The tongue was dry and protruded straight. She complained of pain in the neck on moving her head. She raised both arms with difficulty. There was flaccid paralysis of the triceps of both arms, and to some extent of the shoulder group. She was insensitive to pain on the inner side of the forearm, but felt the pin clearly on the outer side. Respirations were of the abdominal type. There were signs of an inactive lesion of the left apex. The abdomen was distended. The bladder was filled up to the hypogastrium. The legs were flaccid and there was complete paralysis of the legs and feet. All tendon reflexes of the lower extremities were absent. There was a complete loss of appreciation of pain on the back below the level of the second dorsal spine, and in front, below the

level of the distribution of the second dorsal nerve.

Several attempts at lumbar puncture were made. There is no reason to doubt but that the needle entered the canal, but no fluid could be obtained.

There was no improvement in the symptoms during the next two days. On the 22nd the temperature by rectum registered on one occasion  $107.5^{\circ}$ . The pulse was 170. She complained of slight photophobia.

On the 23rd, there was noticed an increasing cyanosis of the face, hands and trunk. The breathing was entirely abdominal and irregular. Her consciousness was much clouded and there was no response to questions. There was no evidence of swelling on either side of the neck. The right pupil was widely dilated and the left was slightly contracted. Shortly before death this pupil dilated to the size of the right.

Death occurred on the 23rd of October, eight days after the beginning of the acute illness.

An autopsy was held a few hours after death. The examination of the internal organs showed slight adhesions around the region of the left apex. There were also adhesions in the region of the spleen, stomach and liver. Otherwise there was little notable for this discussion.

As the cut into the back was made for the removal of the cord one came into a pocket of pus which flowed in from the left trapezius muscle and was traced upward among the muscles of the neck on the left side but its source was not determined. On opening the canal the pus flowed into the canal and obscured the relations. One noticed in the lower lumbar dorsal region that a considerable portion of the dura was hemorrhagic. Otherwise there were no changes of a gross nature in the dura. As the dura was opened the cord in the cervical region was seen to be larger than normal, so large that it filled the arachnoid space at about the level of the fourth dorsal segment. In the examination of the cord there occurred a small ooze of what probably was softened spinal substance through the membranes.

The brain showed nothing pathologic in the gross. The cord was taken to the laboratory and fixed in formalin and prepared for further technical processes by sectioning. In the first preliminary examination of the cord one found in the regions of the fifth, sixth and seventh cervical segment that the cord was swollen and distinctly softened and on cutting one could see evidences of marked changes and hemorrhage. The microscopic examination of the material has proven of great interest. One

finds that at the region of the fifth and sixth cervical segment there is what might be called a degenerative myelitis. The cord is very much swollen; the myelin has disappeared in large patches from around the fibers of the cord and many of the axis cylinders have gone to pieces. One sees in places small hemorrhages and the differentiation between the gray and white substance of the cord is indistinct. There is a marked proliferation of the neuroglia and marked involvement of the gray substance of the cord by a very severe degenerative process. One sees numerous compound granule cells or epithelioid phagocytes filling the vacuoles left by the absent myelin and around the blood vessels. This condition can be seen for some length through the cord. One sees traces of this through the fifth and sixth cervical segments and almost to the first dorsal segment. In a preparation by Marchi's method you will see in the posterior horns a blackened area in the center which marks the position of the softened part of the cord. The remainder of the cord is rather porous.

The process in its extent is a very complete transverse myelitis. When one examines the segments below the cervical region little is found. There is some hemorrhage in the dorsal region. In the lumbar region there is practically no involvement. There is no meningitis, perhaps an early proliferation of the cells of the pia.

There is adhering to the outer layer of the dura a necrotic mass in part made up of pus, but chiefly of masses of lymphocytes, phagocytes and epithelioid cells, cells which one sees in tuberculous inflammations.

Histologically in the laboratory we were able to come to the conclusion that the type of process present in the dura was of the type seen in tuberculosis or syphilis. We believed that the process was of a tubercular peripachymeningitis.

From the autopsy, pieces of the bodies of the vertebrae were sent to the Pathological Laboratory, and recently Professor Warthin informed us that in these he found small caseous areas, which he affirms are due either to tuberculosis or syphilis.

This confirmation of our own diagnosis of a tubercular process, from the character of the changes in the tissues of the cord, clears up the pathology in a very interesting and instructive manner. There was apparently a tuberculosis of the vertebrae of the cervical region, with a purulent process extending from this out into

the tissues of the adjacent muscles of the neck and a more recent extension of the process inward to the dura mater, producing a compression myelitis of the cord.

There are a number of interesting points about the case. The first point is the matter of diagnosis. We had a young girl coming in at the time when one was hearing much of poliomyelitis. At first the knee jerks were present. Later, the knee jerks were gone and there was a temperature and indefinite nervous symptoms. However, the very complete picture of a transverse myelitis rather spoke against poliomyelitis. Furthermore, the sensory disturbances, which rapidly developed were against that diagnosis. Another interesting point in the case was the absence of knee jerks in a transverse myelitis. We are accustomed to believe that where there is a compression myelitis a spastic condition results with increased knee jerks. However, we know from a rather large number of examples in the literature that in lesions of the cervical cord the usual picture is that of a flaccid paralysis with absence of reflexes in the legs. Any reason for this is purely theoretical. No explanation holds against criticism. It is sometimes said that there is in addition to the high focus, a focus of degeneration in the region of the nerves to the quadriceps femoris. However, in this case the nerves in this region were normal.

The condition is a compression myelitis, and yet there does not seem to have been much compression. That opens a very interesting line of thought as to how this does occur. Here we have a softening of the cord through a considerable area which was not due to an infection. Practically it was a dropsical condition of the cord and subsequently a softening or breaking down of the tissues. Such changes are often seen in compression myelitis. And yet they are not due to the direct contact or impinging of a foreign substance upon the cord itself. The cord is more or less easily adaptable to foreign bodies in the canal. It is, however, probably due to some changes which this compressing substance has upon the circulatory structures in the epidural spaces. We have in these spaces a very rich venous plexus carrying off blood from the cord. It has been shown that if anything interferes with this venous arrangement there very quickly occurs softening of the cord underneath. It would seem that this theory quite adequately explains the conditions in this case. It is rare to have a case develop so completely while under observation.



## DISCUSSION.

DR. NELLIS B. FOSTER: The case was particularly interesting to all of us because of the diagnostic problem involved. It is one of the most confusing cases which I have seen, coming at a time when we were all of us looking for cases of anterior poliomyelitis. This girl who was a proper subject, the first few days when she was under observation might well have been a case of poliomyelitis. After a couple of days of observation it was quite evident that it could not be anterior poliomyelitis. Then one thought of an atypical tuberculous meningitis. We made an anatomic diagnosis of transverse myelitis but we could not make an etiologic diagnosis.

DR. BARRETT: The question was asked, "Why no fluid was obtained by the second and later lumbar punctures." It does not seem possible to answer this with any certainty. It might be that the extreme dropsical condition of the upper segments of the cord may have taken up some of the fluid of the canal.

One may speculate as to why the tendon reflexes of the lower extremities sometimes disappear in lesions affecting the high cervical regions. A very suggestive theory for this is that where the paths to and from the brain are cut off there may be a marked loss of tonus essential for reflex activity, which is preserved through the flow of nervous energy from the brain to lower levels. This is in harmony with the fact that in this case the Babinsky reflex was obtained a few times and then lost.

## A CASE OF MULTIPLE SCLEROSIS DEVELOPING DURING AN ACUTE PULMONARY TUBERCULOSIS.

THEOPHIL KLINGMANN, M.D.

(From the Neurologic Clinic, University Hospital, Ann Arbor, Michigan).

The patient, a girl, 16 years old entered the University Hospital on July 18, 1916, complaining of difficulty in walking and talking and blurring of vision. Further she observed that her eyes turned in, all of which developed about the middle of June, 1916. In May of the same year she had a severe attack of measles from which she made a good recovery. About two weeks after her recovery from the measles she developed a severe "cold" with severe headache and was in bed for two weeks, the headache continued for one week, during which time there was nausea and vomiting. At the end of two weeks she was unable to walk without support and she had a speech defect, blurring of vision and paralysis of the internal recti. About ten days later she began to improve; one of her eyes resumed its normal position, the speech defect was less pronounced and she could walk better but several weeks later she suffered from retention of the urine; there was no incontinence. With the beginning of the present illness there was suppression of the menses.

In the previous medical history it appears that she was ill in December, 1915, when it was thought that she had influenza. She was not confined to bed and made apparently a good recovery at the end of two weeks. A few weeks after this illness she had spells of sleepiness during the day and suffered from more or less headache and backache all of which lasted four or five weeks. In early childhood she had whooping cough and chickenpox.

The family history reveals that the patient had one sister who died in childhood of spinal meningitis following measles and another sister who died of cholera infantum at the age of eight years. She has two sisters living, one has appendicitis and one is suffering from a deformity contracture of the flexors of the left arm and a deformity of one foot which came on after an attack of measles when she was eighteen years old.

The patient was first examined on July 20, 1916, by Dr. Camp and the following notes were made: The patient is well nourished and says she feels well. She has an impediment of speech, not a scanning speech. There are no enlarged glands of the neck, the teeth are irregular but in good condition, the scapulae are scaphoid. There is a slight internal strabismus, the left eye does not rotate outward normally. The pupils are equal and react to light, the left pupil is slightly sluggish, both react normally in accommodation. There is no tremor of the tongue, no paralysis nor atrophy and no paralysis nor tremor of the face muscles. There is a slight intention tremor of the hands more marked in the right. There is no atrophy nor deformity of the hands. In grasping objects she is awkward with both hands, especially with the left. The biceps and triceps jerks are increased but equal on both sides. The knee jerks are present, the right being more prompt. There is an ataxia of the feet. The plantar reflex is normal on both sides.

Ten days later the examination showed some changes; the pupils were prompt to direct light stimulation but the paralysis of the external recti was more marked and the outward excursion of both eyes was limited. There was a horizontal nystagmus on lateral deviation of the eyes. The speech defect was more marked, explosive and halting in type. The hands were more ataxic but there was no change in the gait. The tendon reflexes were all increased with an ankle clonus on the left side but a normal plantar reflex on both sides. Soon after this the patient left the Hospital. She was given small doses of Fowler's solution and elix. phos-

phate of iron, quinin and strychnin. She returned to the Hospital on October 12th much encouraged and rather euphoric. She was still coughing and had some expectoration. The dyspnea was more marked especially on slight exertion and owing to this she was referred to the Department of Internal Medicine. A sputum examination was made but it revealed nothing of importance. The patient had some physical signs of pulmonary disease. The X-ray showed an interesting condition and the report from the Department of Roentgenology is as follows: The lungs are uniformly peppered with small opacities the size of a millet seed, some of them grouped but mostly they are discreet and have all the characteristics of miliary tuberculosis of about the fourth to the sixth week. A greater area shows a slight opacity of the left apex which may possibly represent an older lesion. There are no enlarged thoracic glands.

The neurologic examination at this time was as follows: The pupils react promptly to light and in accommodation. There is marked horizontal nystagmus but no extraocular palsy. The tongue is protruded straight and without a tremor; there is no facial palsy. The movements of the hands are ataxic especially the right. The station and gait are ataxic. The biceps and triceps jerks are brisk, the knee and Achilles jerks are equal and about normal. The plantar reflex is not obtained on either side. There is no objective disturbance of sensation of any kind.

Ophthalmoscopic examination, July 24, 1916. There is a slight paling of the temporal portion of the disc of the right eye, the disc in the left eye is hyperemic, the retina is also hyperemic. There is paralysis of the left external recti.

Serologic and chemical examination of the spinal fluid, July 22, 1916. The spinal fluid is clear and colorless and the number of cells normal. Nonne-Apelt phase I negative, phase II negative. The reducing substance is slight. Wassermann reaction negative. The Wassermann reaction on the blood serum is negative.

The case is of interest, first, because repeated neurologic examinations were possible at intervals of from two weeks to two months showing changes in the clinical picture. Most of the symptoms were transient, some of them became permanent while others disappeared entirely. Second, the physical signs of pulmonary disease were slight, while the X-ray picture showed an extensive process in both lungs. The ophthalmoscopic examination was in accord with the neurologic condition. Third, the neurologic

disease developed with the pulmonary tuberculosis. It is possible that the first illness in December, 1915 was tuberculosis, at least the X-ray picture would lead one to think so from the older lesion. Although slight but definite signs of a nervous disease followed it is also possible that this condition began at that time and that the illness coming on a month later was only an exacerbation of the already developed conditions and that the attack of measles was the inciting cause.

Last year I reported three cases of multiple sclerosis which came to autopsy, all of them having definite signs of tuberculosis in the lungs. I have had one since this report in which the autopsy revealed a pulmonary tuberculosis.

#### DISCUSSION.

DR. D. MURRAY COWIE: I should like to recommend the advisability of running some of the chemical tests, the diazo and permanganate tests.

DR. MARK MARSHALL: I had the opportunity of examining this patient. The sputum was examined and found to be negative so far as tubercle bacilli are concerned. The physical signs in the lungs were just what would be expected from the examination of the X-ray plate. There were crackling râles of every size in every part of the chest and to some extent there were piping râles. If the patient had remained longer we would have made more sputum examinations using the concentration method in the hope of finding tubercle bacilli.

DR. KLINGMANN: The tests Dr. Cowie spoke of were not made, since the patient left the hospital before her examination was completed.

### TREATMENT OF DIPHTHERIA CARRIERS. REPORT OF 125 CASES OF DIPHTHERIA.

D. MURRAY COWIE, M.D.

(From the Pediatric and Contagious Disease Clinic, University Hospital, Ann Arbor, Michigan).

Dr. Cowie read a paper on the above subject. He reported a series of 125 cases of diphtheria, seventy-nine of which he treated by the use of the various methods proposed for the elimination of the diphtheria bacillus from the throats of diphtheria patients and forty-six cases by the vigorous use of the kaolin treatment. The results were the same with the kaolin treatment as with the other methods employed. He also reported seventeen cases of diphtheria in which tonsillectomy and removal of adenoids were employed to clear them up. In 86 per cent. of these cases the throat and nasal passages became negative to the Klebs-Loeffler bacillus within a comparatively few days; as soon as the inflammatory reaction following the operation was over.

Dr. Cowie called attention to the fact that



all cases of diphtheria terminate in what may be called a carrier period, because there is almost invariably a certain number of days, after the patient has recovered from the acute infection, during which the bacilli persist in the nose or throat. Accordingly, he classified carriers as short and long carriers. He pointed out that long carriers are often individuals who have never had the disease themselves.

The important points brought out in the paper are: 1. That no case should be discharged from quarantine until at least three consecutive negative cultures, very carefully taken, are obtained; better four. He referred to the paper of Dr. Walthall on the method of taking special cultures in these cases, given before this Society last spring. The idea of this thorough examination is to terminate all short carriers. 2. That for all refractory cases and bona fide instances of long diphtheria carriers tonsillectomy and removal of adenoids are the most efficient methods of eradicating diphtheria organisms from the upper respiratory passages. The operations are unattended by serious results. No cases of reinfection have occurred. In almost all cases of diphtheria the tonsils are involved. In most carriers the organisms are confined to the tonsils or adenoids.

#### DISCUSSION.

DR. JOHN A. WESSINGER, City Health Officer: It does not seem to me that we should let this paper pass without saying a word upon the subject. I cannot help but feel extremely interested in the work which Dr. Cowie has done from the standpoint of epidemiology as well as the standpoint of public health. The problem of the disposition of the carrier of disease is an important problem and a puzzling one. I am aware that a great deal of work has been done along this line with the diphtheria carrier. I am glad to be in accord with what Dr. Cowie has said upon this subject. I am glad to hear that so much has been accomplished by the use of kaolin. I have given some attention to this subject during the last two or three years and I had rather formed the impression that the successful route of elimination of the carrier of disease would be a biologic one or by means of antagonistic bacilli. Two or three years ago we did some work along these lines. Previous to that time one of our schools in the city was perennially afflicted with diphtheria, three or four cases each year in that particular school. We made an examination of the throats of 150 children and found twenty-one diphtheria carriers. That work was done previous to the kaolin method and we felt at that time that we had attained a measure of success at least with the lactic acid bacillus. I notice that since that work has been done we have had no more trouble in that school. While the work done by Dr. Cowie and his associates and the men in Chicago seems to be in favor of the kaolin methods, there are others who seem to discredit this method. So it still seems to be in

an experimental stage. I believe we have been in the habit of discharging our quarantine cases altogether too early. I am glad to know that it requires three negative cultures in this institution before cases are dismissed and I wish it might be four. All of us who have had experience with diphtheria carriers know that they are tonsillar. I have always supposed that it would be very, very difficult to reach bacilli lodged deeply in the crypts with any chemical or mechanical means less than a total extirpation of the tonsil. For that reason I can see why it would be a good thing to do a total extirpation of the tonsils as well as the adenoids in these patients. I believe that is the best method of getting rid of the carriers. I hope that the treatment with kaolin will work out successfully.

While I am on my feet I wish to make a slight digression. We are remarkably free from contagion in this city at the present time. There are no placards out but there is an outbreak of smallpox in a neighboring city. I hope that we shall get no smallpox from that outbreak but I fear that we shall. We have 33 students in the normal school who are residents of Ann Arbor. I therefore wish to ask the physicians to be cautious in making a diagnosis of chickenpox. I think it would be well for the contagious ward to be in readiness because we may get some.

#### LANTERN SLIDE DEMONSTRATION OF RADIOGRAPHIC FINDINGS.

JAMES G. VANZALUWENBURG, M.D.

(From the Clinic of Roentgenology, University Hospital, Ann Arbor, Michigan).

1. Case of extensive diverticulum of the esophagus.
2. Case of supposed sarcoma of the knee. Thorax showed erosion of the ribs. Hip shows expansion of the great trochanter. Curious moth-eaten texture of the skull cap. Wrist shows similar defects. Another defect in the metacarpal. In the phalanges hairlike nap on the periosteum. Diagnosis open.
3. Case of large kidney with large stone in the pelvis.
4. Case of aneurism without enlarged or displaced heart.
5. Case of lumbarized first sacral.
6. Calcified hematoma.
7. Case of fracture of the skull by exploding dylitis deformans.
8. Case of supposed Pott's disease. Spondylitis deformans.
9. Case of migrating needle in the foot.
10. Case of stone in the bladder.
11. Case of calcified glands in the hilus of lungs.
12. Case of post pneumonic infection of the lungs.
13. Case of pulp stone in the tooth. Also lime absorption in the mandible. Jaw locked.

Probably an old fracture and congenital deformity.

14. Case showing areas of decalcification at the ends of teeth. Also showing poorly filled root canals.

15. Case of anomalous tarsal bone, os trigonum.

The last case is illustrative of a class of cases that frequently lead to considerable confusion of the inexperienced.

A fracture of the posterior tubercle of the astragalus is not so rare, it being a minor injury frequently overlooked on the clinical examination and healing fairly kindly so that no suspicion is aroused against the diagnosis of sprain. Accordingly this diagnosis was tentatively made with the request that the patient be returned for an examination of the opposite foot to see whether the condition was symmetric. A second radiogram of the well foot (Fig. 2)



Fig. 1. Injured foot. Shows the accessory tarsal bone simulating a fracture of the posterior tubercle of the astragalus, requiring examination of the uninjured foot for comparison.



Fig. 2. The uninjured foot shows a similar accessory bone at "a." At "b" is seen an osteophyte, the result of a previous football injury.

The patient presented himself for a football injury of the ankle. The radiograph taken at this time (Fig. 1) showed the posterior tubercle of the astragalus, apparently separated with a narrow fissure from the body of the bone. This fissure was rather clean cut with sharp margin and without the line of density which we usually see surrounding the separate and distinct bones which represent the cortex in tangential pro-

shows a similar deformity and therefore leads to the diagnosis of anomalous tarsal bone.

No less than nine of these anomalous bones have been described. The majority of them represent ununited centers of ossification or vestiges of tarsae which have disappeared during the development of man. Several of these have been given names, among others this particular anomaly has been called os trigonum.

*Toxinal.*—Toxinal is a "syphilis remedy" marketed by the Hawes Chemical Co., Louisville, Ky. It is a shotgun mixture characteristic of the days when syphilis was treated with haphazard mixtures of iodides, mercury and vegetable "alteratives." The Council on Pharmacy and Chemistry has examined Toxinol and the claims made for it, and reports that Toxinol is ineligible for New and Nonofficial Remedies because it is an irrational combination of drugs,

marketed under a name that is non-descriptive of its composition and with unwarranted and misleading claims (*Jour. A.M.A.*, Dec. 2, 1916, p. 1687).

*Toxicity of Salvarsan.*—From the reports of O. S. Ormsby and J. H. Mitchell, A. M. Moody and J. D. Ellis in *The Journal A.M.A.*, Dec. 9, 1916, it would appear that some of the salvarsan recently on the market has been unusually toxic (*Jour. A.M.A.*, Dec. 9, 1916, p. 1764.)



**The Journal**  
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February

*Editorials*

FORMATION OF HEALTH BOARDS IN CITIES.

Dr. Baker in his address on “Early History of Michigan State Boards of Health” delivered at the last Annual meeting of State Medical Society said, “The knowledge of the most worth to the most people was to round out the plan of the State Board of Health in educating the people in preventive medicine, in treating contagious diseases and devising means to quarantine same so that the public could be protected.” This knowledge was considered of no consequence by his successor in office who was appointed politically instead of by the Board as had been the previous method. The appointing power chose the executive more for his political pull than his knowledge of preventive medical and sanitary science. For ten years we have suffered from this mistake and will continue to suffer until it is corrected. Is it not time for all who have an interest in Sanitary Science and preventive medicine to try and correct this mistake, throw politics aside and join hands with State Board of Health to spread this knowledge given to us by Drs. Baker, Vaughan, Kenzie, Kellogg, Hazlewood and others? In order to spread this knowledge we must have efficient township, village and city Boards of Health that must work in unison with our State Board of Health. The heads

of these boards must be medical men with some knowledge of our health laws and sanitary science as they by virtue of their office are the executives. In other words they, in order to fill these offices, must be graduates of good medical colleges and registered according to the laws of the State of Michigan. Is such the case? No, for in the township in which the capital of this state is located a supervisor has been health officer for years. Why, because the health laws of the state give him that right and the right to use it for political purposes. Should the law be amended? Since Dr. Baker went out of office our cities have increased in size rapidly due to our vast manufacturing interests and the problem of establishing health boards in them has been a very difficult one. Why? Because the health laws do not designate the formation of a health board in cities of only 10,000, over that they have left to mercy of the political power of the city council and their favorites. The home rule clause in most of our city charters give the city council power to form any kind of board of health they see fit and as a result or lack of law they can appoint a board that is only fit for a small village or backwoods township. Matters of sewerage, disposal of garbage, quarantine, etc., are left to the senior aldermen who form the board of health with the health officer who is appointed more on his qualifications of political pull than his knowledge of matters appertaining to sanitary science.

We have entered upon a state wide education in tuberculosis and after the preliminary survey is completed the work will have to be carried on by the health boards of this state and especially the city health boards. Does it look as if it would be carried to a successful end by these inefficient city health boards? Can the State Board of Health do much in spreading sanitary knowledge through such boards? In speaking about this matter with present Secretary of State Board he made the remark that no city in the state violated the health laws as did the capital city of this state.

Last winter the Committee on Legislation of Ingham County Medical Society seeing the need of a better board in our capital city laid the plan of a non-political board before the city council, was instrumental in getting the charter amended so such a board was appointed. Now in the appointment of the members. The committee’s plan was ignored, the medical society, or the State Board of Health was not consulted as to who would be suitable and in absence of state law that should define qualifications of

members, out of six members, one doctor, one dentist was appointed and four political friends of the appointive power.

The board have a new health officer and in his appointment they took advantage of the law, and the laws requirements for a health officer for township or village which says that he must be a well educated physician, the other requirements as to being a graduate of dental, veterinary or medical college or a man that is registered being left out.

I think I can voice the sentiments of all medical men who have preventive medicine and sanitary science in view and who have worked with the State Board for spread of knowledge along that line that we need a law defining the appointment and election of city boards of health in cities of over 10,000 inhabitants, their qualifications and duties.

FRANK M. TURNER,

Chairman of Legislative Committee of Ing  
ham County Medical Society.

#### SANITARY SWIMMING POOLS AND THEIR CONTROL.

The swimming pool is a live topic in this county and they are being rapidly established throughout this country. A few words on the swimming pool from a medical standpoint will probably interest all of us. Two years ago I examined smears from cases of valvo-vaginitis occuring in a neighboring town. I do not know if the source of this infection was definitely located but the swimming pool may have been considered and ruled out or vice versa. The swimming pool when in use is always infected, and, unless proper care is taken, may be a source of disease and even of epidemics. Lewis had classified these infections as chiefly gastro-intestinal, respiratory and venereal. It is an established fact that intestinal infections have resulted from bathing in contaminated water. Mannheimer recently demonstrated that the water of two first class pools, after one day's use, contained from 75,000 to 600,000 bacteria per cubic centimeter, and of these, colon bacilli varied from one to 100 per cubic centimeter. In addition, the possibility of dangers from typhoid carriers must be considered. The respiratory affections, such as mild epidemics of "sore throats and colds," are quite common; ear complaints were frequent among bathers at the Chicago lake beaches during the past summer. Hastings states that these infections "are far more dangerous than some other conditions for which strict health regulations are

enforced. Many mastoids, and some deaths occur that should be and can be prevented by keeping people with 'colds' from swimming." Although Skutsch reported 236 cases of gonorrheal vulvo-vaginitis from exposure in one pool, yet the gonococcus seldom seems to be a serious menace.

Lewis considers the means of safeguarding the pool under the headings of: (1) construction and equipment, (2) disinfection, (3) suits, (4) the preliminary shower, (5) inspection and exclusion, (6) bacteriologic control, and (7) sanitary education.

The pool, free from all obstructions, should be located where a maximum amount of air, light and ventilation may be obtained; a raised broad flat edge around the pool is essential in order to protect it from floor drainage. It is preferable to rotate the same water for several weeks, employing a continuous filter and adjunct sedimentation basin, rather than to refill the tank weekly or biweekly with fresh water. No system, however, is safe without daily sterilization. As the ultraviolet ray probably is a most efficient form of sterilization, proposed swimming pools should be constructed so as to provide for this newer method of disinfection by means of the energetic "short wave lengths."

Experiments were made by Lewis on various pools in or about Evanston, Ill., as to the best chemicals and method for disinfection. As to calcium hypochlorite, which the author regards as good, if not better than other chemicals, he says:

As a rough criterion, a tank of 60,000 to 70,000 gallons' capacity needs one pound (of calcium hypochlorite) per day.

The system of adding in solution by means of a synchronous pump, working with the circulative pump in the continuous filtration system, has the advantage of mechanical control and uniformity of feed. I am yet to be convinced, however, of its advantage over the simple expedient and adding the chemical by hand at the end of the day's usage. When added gradually during refiltration, the concentration is never so high as when the whole amount is put in at once. The germicidal action is, therefore, not so great. Moreover, when added continuously, the swimmers are in contact with the fresh solution and may complain of odor and tastes. If added at night it has fully reacted and by morning is fully dissipated, leaving a sterile, wholesome water with which to start the day. An effective and simple method of adding hypochlorite is to transfer the chemical to a thoroughly perforated can and drag it by



means of a wire and a pole over the surface of the pool until it has gone into solution.

Of importance is the cleanliness of the suit, which should be as nearly sterile as possible. The use of soap in taking the preliminary shower should be strictly enforced, irrespective of whether the bathers are men or women. The contamination from lack of bodily cleanliness, together with the dirt of the floor picked up by the feet leads to wanton pollution. "However carefully the water in the pool is renewed and purified, the good work is wholly undone if care is omitted in the prevention of water contamination."

A rigid inspection of the users is necessary in order to exclude all showing signs of infection from venereal and skin diseases, coughs, colds and tonsillitis. Expecterating, and blowing the nose by nearly every swimmer makes these infections dangerous to all.

Scientifically a pool cannot be controlled unless adequate bacteriologic tests are made. By this means its condition can be ascertained before the pollution has assumed such alarming proportions as to manifest itself in the form of an epidemic. The sanitation of the swimming pool is a matter of common sense; those who do not respect the privileges of the pool should be deprived of its use. Not until every user of the pool has an intelligent understanding of the conditions involved, and is willing to encourage the enforcement of sanitary regulations, can we hope to have really safe pools. One epidemic traced to this source may put the pool in disrepute.

With the establishment of pools in our communities a pamphlet should be issued by the health department which will point out dangers from these pools and educate the public so that the users will be on the alert to see that these dangers are kept at a minimum.

GEO. M. BELHUMEUR.

### TUBERCULOSIS SURVEY.

We are incorporating in this editorial a prepared summary of the work accomplished by the State Board of Health in the statewide Tuberculosis survey that is now being conducted. This summary is extracted from the voluminous and detailed report of that board to the Governor. We would that it were possible to publish the entire report in detail. To do so would require practically one entire issue of *The Journal*. Inasmuch as we understand that the complete report will be available in

printed form we must ask our readers to be contented with this summary for the present.

A careful reading of the report convinces one of the monumental task that has been undertaken. When the funds appropriated have been exhausted and the state covered, the tabulated results will be indicative of a crying necessity for permanent, periodic clinics, statewide in their scope. Such clinics while at first devoted to tuberculosis must eventually broaden in their scope and devote their efforts equally to cancer, venereal diseases—in fact embrace the major problems of health conservation and prevention of disease and the education of the public.

This survey has been a constructive effort without precedent and has blazed a trail hitherto untraveled. Mistakes in management, methods, the keeping of records and in executive detail did occur—could not help but occur. As experience was gained errors were corrected and thus of late there has been accomplished greater results and more accurate information tabulated. Could the entire state be re-canvassed still more valuable data would be secured. However, a pace has been set; valuable information has been recorded. The evidence obtained is self sufficient to conclude that it has been worth while. The convincing figures are at hand wherewith we can appear before the Governor, the legislature, the press, and the public and declare:

1. The necessity of Permanent, Periodic, Statewide Clinics.
2. The necessity of Whole Time Health Officers.
3. The necessity of establishing Sanitary Districts.
4. The necessity of the continuance of the movement to eradicate Tuberculosis and later the adoption of similar methods in regard to venereal diseases, cancer and the right way to live.
5. The necessity of larger appropriations of funds to the State Board of Health in order that it may be enabled to develop these movements in the interest of the health, happiness and longevity of the people of Michigan.

We submit the following summary as advance information:

#### PURPOSE OF THE STATE BOARD OF HEALTH TUBERCULOSIS SURVEY.

The purpose of the tuberculosis survey conducted by the State Board of Health in accordance with the provisions of Act 238, Public Acts of 1915, is threefold:

1. To find by actual physical examination every case of tuberculosis that can possibly be discovered in every community in the state.

2. To give every victim of the disease so discovered, together with his family, all the information they may need to make an effective fight for health.

3. To arouse each community, as much as possible during the limited time at command, to a realization of the necessity of bending every local energy to an effort to cope with the disease locally.

The first of these is perhaps the most important at this time. Hence, every possible effort is being made to find all the cases of the disease that can be found during the brief period of one or two weeks devoted to a county. If the State Board of Health had a complete record of all the cases of tuberculosis in the State (between 20,000 and 30,000, it is believed) it would be comparatively simple to stamp out the disease. There is a law of course, requiring physicians to report all cases of tuberculosis that come under their observation to the State Board of Health. But even at best this law is but imperfectly lived up to; moreover, the present survey shows that there are thousands of cases that no doctor has had an opportunity to see. To discover these thousands of cases while they are yet in the early stages when they can be easily cured, is the main object of the survey.

It would be ideal for all persons who have tuberculosis to go to a sanatorium to get well. But there is in Michigan only one sanatorium bed for every fourteen persons ill with the disease, so that is out of the question. Hence, the next best thing is to help the victims of the disease to regain health in their own homes. Much effort in the survey is directed to this end. In the county surveys, nurses give all those diagnosed as tuberculous, careful instruction as to what they must do and how they can protect the other members of their families, and a strenuous effort is made to place each person under the personal care of his family physician.

Each city or county can help its own people fight their disease by erecting a sanatorium, by erecting an open-air school, by organizing a full-time health department, and in several other ways. It has been the aim of the survey to arouse the counties and cities to a realization of the necessity of efforts of this kind. And many communities have already taken action, and others are following.

#### HOW MANY CASES OF TUBERCULOSIS WERE FOUND.

During the twelve months from Oct. 1st, 1915, to Oct. 1st, 1916, covered by the forthcoming report on the Tuberculosis Survey, thirty-eight counties in the state were visited. In these counties a total of 11,528 persons were examined in the free public clinics. Of this number 2,914 were diagnosed by the physicians as positive cases of tuberculosis. A total of 2,231 were diagnosed as "suspicious" cases, that is, cases that are likely to be tuberculous in the early stages of the disease. A total of 404 were listed as "arrested" cases, that is, persons who have had tuberculosis but in whom the disease has been arrested. The negative cases, or cases of persons examined in whom no trace of tuberculosis was found, numbered 5,924.

These figures indicate that of the persons examined in the county surveys, 44.6 per cent. were found either to have tuberculosis or to be so seriously threatened with it that they required the attention of a physician.

This fact, brought out by actual physical test, was

a source of surprise to many of the communities where surveys were held. Moreover, it was somewhat of a surprise to medical men in general to learn that the disease is as widespread as it is being found to be. It should be borne in mind that it is not 44.6 per cent. of all persons who have tuberculosis, but 44.6 per cent. of those actually examined in the public clinics, and these were largely selected cases. But even at that, the figures show how widespread the disease is in Michigan.

It should not be assumed that the figures given above constitute all the cases of tuberculosis in the thirty-eight counties visited. On the contrary, the statement should be emphasized that a good many more cases could be discovered in every county visited if visited again. It would be absurd to expect that all cases of tuberculosis in a given community could be found in the course of a few days of public examinations.

In one county, fully a thousand people came to the free public clinics to be examined. Not nearly all of them could be accommodated because it was impossible to devote more time to that county without doing an injustice to other counties that were also waiting for the survey. In several counties, the people have asked the physicians to come again, a request that could not, of course, be granted because many other counties were still waiting for the first visit. In only one case was a return call made, and in the course of a one day clinic in a city of 5,000, scores of people were examined and many additional cases of the disease found.

#### HOW THE TUBERCULOSIS SURVEY WAS CONDUCTED.

The State Board of Health tuberculosis survey began on Oct. 1st, 1915, and under the terms of Act 238, Public Acts of 1915, it is to close on June 30th, 1917, a period of 91 weeks in all. There are 83 counties in Michigan, so that, taking the county as a unit of the survey, the time limit allowed is a trifle more than a week for each county.

During the twelve months of the survey covered in the State Board of Health's forthcoming report to the 1917 Legislature, 38 counties were visited. While this is less than a county a week, the counties are among the largest in the state, many of them, and it seems no more than just that the larger counties should have more time devoted to them than the smaller ones.

In the tuberculosis surveys, three weeks are devoted to the largest counties, two to counties somewhat smaller, one to the smallest ones, and occasionally two counties are grouped together in a week's survey.

In a three weeks' survey, the first week is devoted to making all the necessary preparations. Nurses are sent into the counties to interest the local doctors, anti-tuberculosis workers, civic organizations, schools, churches, etc., in the work. The aid of the newspapers, ministers, manufacturers, etc. is solicited. In every possible way, the community is aroused to take an interest in the survey with a view of getting all persons who are physically run down to come to the free public examinations.

These free examinations are held the second week of the survey. Usually they are held in four or five places in a county at the same time. Competent physicians and nurses are on hand in some centrally located building to examine free of charge all per-



sons who come. From eight o'clock in the forenoon till five in the afternoon these free examinations are held and usually some four hundred persons are given a careful physical examination in each county of any size, while sometimes more than that are examined.

During the final week of the survey, public addresses about tuberculosis, its causes, prevention and cure, are given. Speakers give talks in the schools, in churches, before civic organizations, at meetings of medical associations, before common councils, before boards of supervisors and everywhere else where they can get a hearing. These addresses emphasize the necessity of local action to curb tuberculosis by building sanatoria, open-air schools, etc.

In the two weeks and one week clinics the procedure is the same, less time being given to each phase of the survey.

#### PROPORTION OF "NEW" CASES IN STATE TUBERCULOSIS SURVEY.

The question perhaps most frequently asked in regard to the free examinations for tuberculosis of the Tuberculosis Survey is: "How many of the cases of the disease found are new cases?" Obviously, it is vitally important whether the cases are of persons who have been diagnosed before, who knew they had the disease, whose doctors knew they had the disease, or whether this is the first time they have been discovered.

In answer to this question the following statement is a startling one, but it is based on figures carefully tabulated from the records of several thousands of individual cases that were diagnosed as "positive" in the county surveys of thirty-eight counties. *Of the total number of positive cases, only 2.2 per cent. had been previously reported to the State Board of Health.* In other words, 97.8 per cent. of the positive cases can be looked upon as "new" cases. By actually questioning patients, it was found that over 96 per cent. admitted they knew nothing about it.

A startlingly large number of the persons listed as "positive" cases did not know they had the disease until they were told so in the free public clinics. In some cases, they had no suspicion of the truth. In a large number of cases, the victims knew only that there was something wrong with them, but it did not seem serious enough so that they would have consulted a physician. But because the state provided these free examinations, they came to have themselves looked over, with the result that positive tuberculosis was discovered in them.

It is believed that it is in this that the real value of the tuberculosis survey comes out most clearly. Anything that can be done to discover the disease in the early stages is effective work. It is then that tuberculosis can still easily be cured. The whole tuberculosis problem for this state, as well as for every other state and country in the world, lies in this, that it is practically impossible, under present conditions, for the physicians and the health workers to get hold of the "new" cases while they are still new. It is a well known fact that it is characteristic of tuberculosis to cause its victim to believe his trouble is a "bad cold" or throat trouble or indigestion or some other minor ailment, until the disease has advanced quite far. Many health

workers believe that if every person would submit to periodic physical examinations, tuberculosis could be wiped out in a comparatively short time, because it would be practically impossible then for the disease to get a foothold. And it is believed that the state of Michigan, by making these free examinations possible, has already been instrumental in saving many from the disease who had it in the early stages and did not know it, as well as saving many who were on the verge of contracting it.

#### EDUCATIONAL WORK IN THE MICHIGAN TUBERCULOSIS SURVEY.

Dr. W. A. Evans, health editor of the *Chicago Tribune*, published an article in the *Tribune* of Dec. 12, 1916, on Michigan's tuberculosis survey which began with the sentence, "No state has a better consumption campaign than Michigan." And much of the success of the survey is due to the educational work that accompanies the free clinics.

This work consists in nurses visiting patients, instructing them how to take treatment and distributing literature, speakers delivering addresses in schools, churches, before councils, board of supervisors, etc., a publicity man preparing educational publicity for newspapers. In every county, the people are strongly urged in this educational campaign, to appoint full-time health officers and visiting nurses and to erect sanatoriums and open air schools.

Since the survey began, three full-time health officers have been appointed in Michigan cities, and eight visiting nurses. In eighteen counties, agitation has been begun for the erection of sanatoria. In two counties, St. Clair and Wexford, sanatoriums have been provided for to be erected soon. In eight places, state open-air schools have been either opened or provided for since the beginning of the survey, and in eight places, the local physicians have organized free weekly clinics conducted on the plan of the State Board of Health clinics.

The results of the educational side of the survey are necessarily definite and less immediate than the results of the free public examinations. The work done in the examinations can be listed in sets of figures, but what results from the educational work cannot be so listed. Sometimes it takes a long time for a city or a county to act on advice given during the county survey. Anyone who is familiar with how public sentiment grows on any subject will appreciate this statement. But it would appear from the definite results already obtained that much can be looked for from the educational parts of the tuberculosis survey.

And when results are obtained from this work, they are important. For instance, when a city adopts the full-time health department system as a result of a survey, it means that very many cases of tuberculosis are going to be prevented in the future in that city. It is a result that is going to keep on bearing fruit from year to year, long after the present campaign has been forgotten. Similarly, when a county builds a sanatorium or an open air school, these institutions are going to keep on combatting tuberculosis in the distant future, when the present survey is only a memory.

TUBERCULOSIS IN MICHIGAN'S SCHOOLS AND DURING  
THE PRODUCTIVE PERIOD OF LIFE.

During the twelve months from Oct. 1, 1915, to Oct. 1, 1916, a total of 1,114 persons of school age (i. e., from five to nineteen, inclusive) were found to have tuberculosis in a positive form.

There is a special reason why the State of Michigan and every other state fighting tuberculosis, should lay stress on work done among children. Anti-tuberculosis workers have come to understand that in reaching them lies the real hope of success. It is now quite generally held that a very large percentage of cases of tuberculosis of adults is the result of the disease contracted in childhood. It is believed that the disease often remains dormant for many years until the strain and stress of life break down the individual's resistance and causes him to fall a victim to the germs that have lain hidden in his system since childhood.

If such is the case, the strategic method of attack is obviously to cure the children. By saving them, we are not only saving the present generation of children, but we are saving many of the men and women of twenty-five and thirty years hence.

Aside from that, it is right to pay special attention in a tuberculosis survey, to children because society is in a special way responsible for their health. It compels them to spend several hours a day in school rooms and thereby assumes the responsibility for their physical welfare to a large extent.

Recognizing this responsibility and the very real progress that can be made by fighting tuberculosis through children, the State Board of Health workers have laid special stress in all county surveys on the necessity of establishing open-air schools. The result has been gratifying, although hardly more than a beginning has been made in this great movement.

It was further found that 55.2 per cent. of all positive cases of tuberculosis were between the ages of 20 and 50. It is during those years that a man or woman is worth most to the state. It is then that a father bears the burden of the support of a family and a mother takes care of growing children. That the strain of this is often too great is shown by the large number who break down under it and fall victims to tuberculosis. When such people are poor, the care of their children falls on the community. Hence, it is good business to fight tuberculosis during this period of life.

TUBERCULOSIS IN COUNTY JAILS.

All the inmates in ten county jails were examined for tuberculosis in the course of the county surveys. The total so examined numbered 152, of whom 18 had "positive" tuberculosis; 24 were listed as "suspicious," 9 as "arrested," and 101 as "negative."

Thus, 27.6 per cent. of the inmates of county jails inspected had tuberculosis in either "positive" or "suspicious" form. If it is reasonable to estimate from these sample counties, as it seems to be, that in the neighborhood of 27 per cent. of all the county jails in Michigan have the disease, or are seriously threatened with it, does it not give an illuminating glimpse into the life of a large class of the state's non-jail population? Most of the inmates of county jails are there for short terms because of minor offences. A very large part of the county jail population is recruited from a certain class of citizens

that cannot be definitely fixed by any single descriptive name. The hard working laboring man, the professional man, the business man, seldom, or never, lands in the county jail. It is the person who drifts, who usually is a loose and casual member of the community, with few ties, few connections, small or no means, who lands in the county jail.

And while, as compared with the whole of society, this class of people may perhaps not be important in themselves, the fact that so large a percentage of them are tuberculous becomes important to the whole state because of the fact that this class mingles freely with the rest of the population, during the time not spent in jail and form a source of spread of the disease.

Aside from the duty of each county to make its jails such that they will not aid in the spread of tuberculosis, it seems high time for the people of the state as a whole, in mere self-protection, to take active measures against tuberculosis among all classes of people, the shiftless and drifting, as well as the well-to-do and the stable, for only by reaching all classes can we hope to cure the disease effectively.

The menace that the class of people from which the jail population is recruited is to the rest of society is emphasized by the fact that not a single one of the 42 cases discovered had been reported as tuberculosis to the State Board of Health, and not a single one of the persons diagnosed as tuberculosis knew that he had the disease.

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ENTHUSIASM.\*

Enthusiasm is the dynamics of your personality. Without it, whatever abilities you may possess lie dormant; and it is safe to say that nearly every man has more latent power than he ever learns to use. You may have knowledge, sound judgment, good reasoning faculties; but no one—not even yourself—will know it, until you discover how to put your heart into thought and action.

A wonderful thing is this quality which we call enthusiasm. It is too often underrated as so much surplus and useless display of feeling, lacking in real substantiality. This is an enormous mistake. You can't go wrong in applying all the genuine enthusiasm that you can stir up within you; for it is the power that moves the world. There is nothing comparable to it, in the things which it can accomplish.

We can cut through the hardest rocks with a diamond drill and melt steel rails with a flame. We can tunnel through mountains and make our way through any sort of physical obstruction. We can checkmate and divert the very laws of Nature, by our science.

But there is no power in the world that can cut through another man's mental opposition, except persuasion. And persuasion is reason

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\*Reprint from January, 1917, *Armour Magazine*.



plus enthusiasm, with the emphasis on enthusiasm.

Enthusiasm is the art of high persuasion.

And did you ever stop to think that your progress is commensurate with your ability to move the minds of other people? If you are a salesman this is pre-eminently so. Even if you are a clerk, it is the zest which you put into your work that enkindles an appreciation in the mind of your employer.

You have a good idea—don't think that other people will recognize it at once. Columbus had a good idea, but he didn't get "across" with it without much of this high persuasion.

If you would like to be a power among men, cultivate enthusiasm. People will like you better for it; you will escape the dull routine of a mechanical existence and you will make headway wherever you are. It cannot be otherwise, for this is the law of human life. Put your soul into your work, and not only will you find it pleasanter every hour of the day, but people will believe in you just as they believe in electricity when they get into touch with a dynamo.

And remember this—*there is no secret about this "gift" of enthusiasm*. It is the sure reward of deep, honest thought and hard, persistent labor.

J. OGDEN ARMOUR.

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### *Editorial Comments*

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Kentucky State Medical Association—Report of Committee on Medical Ethics on Nurses as Anesthetists in Kentucky.

It is unprofessional for a physician to assist unqualified persons to evade legal restrictions governing the practice of medicine, and physicians should expose without fear or favor, before the proper medical or legal tribunals corrupt or dishonest conduct of members of the profession.

Your committee in this connection desires to call your especial attention to a violation of these principles of ethics in the employment by surgeons of nurses and others as anesthetists who are not trained in the practice of medicine. It is urged that this is a procedure under the control of the surgeon, but we submit that neither law nor usage permits surgeons to decide who shall be permitted to practice medicine. In addition, few surgeons are qualified better than others of the profession in the administration of anesthetics. In order, therefore, to stop this evil now, your committee recommends that

the medical profession of Kentucky requests its members not to employ others than qualified physicians as anesthetists except in cases of emergency. In order to make the request urgent and effective, we would suggest that the profession should not refer cases to hospitals where nurses are allowed to give anesthetics, and that hereafter no member who so violates the law and ethics shall be considered in good standing in this Association.

Every physician likes to think that he is ethical, and it lies in the power of each one of us to be so.

A physician should not only strive to stand high in the community, but with his professional associates also.

The majority of physicians are ethical, and the medical profession must continue to draw a wide line between quackery and ethics.

(Signed)

C. H. TODD, Chairman.

C. W. HOLLAND.

W. H. CARR.

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The attention of the affiliated members of the Michigan State Medical Society is called to the ethical conduct of the Hygeia Hospital, where the non-secret treatment for narcotism, as given to the medical profession through the *Journal of the A.M.A.*, is used, with the highest per cent. of fixed results.

This treatment, in addition to separating the user from his habit, dissociates the habit from the mind and body of the individual, thus obliterating the craving. The treatment is of short duration; the discomfort minimized.

On entrance, covering all ordinary expenses, a fixed charge is made, which is moderate considering the service rendered in the individual case, and the permanency of the results.

Those interested should write for reprints and general range of prices.

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The January Meeting of the Council was held so late in the month as to make it impossible to incorporate the minutes of that meeting in this issue. The complete proceedings of that meeting will be published in the March issue.

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Unwittingly and sometimes wittingly, the physician, surgeon or specialist utters a remark in connection with a case or surgical procedure that is not only nonsensical but implies ignorance and smacks of quackery or is a play to the uneducated grand stand. Why one would stoop and belittle himself in doing so is hard to explain. If the utterant is deluded into thinking he is placing himself on a high pedestal of glory he is unconscious of the fact that he is in danger of falling into the abyss of ultimate oblivion.

Recently a patient was heard to remark: "Dr.— said my tonsils were so bad he broke an instrument while removing them"—Mr. Thinker will hesitate to employ a man whose work is so bungling and rough as to break instruments in removing tonsils. Another patient remarked: "Dr.— performed a difficult operation this morning. It took him three hours to operate on a hernia." Mr. Educated will avoid the surgeon who consumes three hours to perform a herniotomy. Another was heard to say "Dr.— stated that her spine was so bad that it took him over an hour before he could get the needle into the cord canal to draw off some fluid to examine." Another man remarked: "Dr.— said his tonsils were so near to an important artery that he couldn't remove them because he couldn't stop the bleeding." One lady stated that when her baby was born, two doctors pulled with all their might, another held her on the bed and a fourth one gave her chloroform. Modern obstetrics does not demand such brute force or "forty-two stitches."

When, Oh! When!, will doctors cease to tell people such absurd and unintelligent things? Vague, evasive, ignorant remarks are belittling to say the least. We might better be honest, admit that we do not know, or have erred and seek proper assistance. Our bluffs will soon be detected. It is becoming harder each day to hood-wink a patient because he is demanding modern diagnosis and treatment and will not be content with the mysticisms of the age that is past. Honesty will bring you greater aggregate results.

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### Correspondence

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Avon Lake, Ohio.

Dr. F. C. Warnshuis, Editor,  
Grand Rapids, Mich.

I note in the discussion of the nurse anesthetist, which your editorial in the November issue of the *Journal of the Michigan State Medical Society* engendered, your suggestion that the trained specialist in anesthesia should be heard from.

I am replying to your suggestion not with any intention of continuing any discussion in your columns, but merely to publish some recent developments in the propaganda to conserve anesthesia as a specialty of the practice of medicine and dentistry.

To begin with the Organized Anesthetist intend leaving the ethical phase of the unlicensed anesthetist to the medical and dental professions, as a whole; and the legal phases to the various State Medical Boards and courts of last resort.

In this connection it may interest your readers that after the Attorney General of Kentucky had rendered an opinion declaring the unlicensed or nurse anesthetist illegal; and after the Kentucky State Medical Association had declared the nurse anesthetist unethical, her employer not in good standing and had requested members to boycott hospitals employing nurse anesthetists, Dr. A. T. McCormack, to finally adjudicate the matter, arranged an agreed case, Dr. L. Frank and Margaret Hatfield vs. State Board of Health of Kentucky, which will be tried in the Louisville Courts and

then will be reviewed on appeal by the Supreme Court. Whatever adjudication of the unlicensed anesthetist in relation to licensure and reciprocity develops from the decision in this case will have some definite value in determining the legislative policy of other states. Until such a time as this decision has been rendered further discussion of the legal status of the nurse anesthetist would be rather futile.

Those employing nurse anesthetists who took exception to the ruling of the Ohio State Medical Board, as announced in your November editorial, have sent the Board a signed statement agreeing to its demands and Lakeside Hospital has been reinstated as an Acceptable Training School.

However the exponents of the nurse anesthetist almost immediately thereafter circularized the hospitals of Ohio in an effort to secure sufficient support to warrant an amendment to the existing law that would legalize nurse anesthetists. The circulars issued misinterpreted the ruling of the Ohio State Medical Board by attempting to project the fifth-year interne into the controversy. During the open hearing at Columbus, President Simeon, interrupted the proceedings to announce authoritatively, that the Board and the Organized Anesthetists were a unit in protecting the interne in his rights and privileges to practice any phase of medicine, surgery, dentistry or their specialties under proper supervision. Moreover it was announced that the Organized Anesthetists were advancing the teaching of anesthesia and training in its administration as rapidly as the sympathetic attitude of the medical and dental professions permitted.

To offset the medico-political activity of the exponents of the nurse anesthetists, resolutions were circularized to the component County Societies of the Ohio State Medical Association, and these resolutions denouncing any meddling with the existing law in order to legalize nurse anesthetists, were passed, with the approval of the President, the State Council and the Committee on Public Policy and Legislation by most of the larger County Societies, representing over 90 per cent. of the profession throughout the state.

Certain employers of the nurse anesthetist are continuing her use in Ohio against the decision of the Ohio State Medical Board and the ethical verdict of the profession. These parties are hoping that remedial legislation will yet be passed to protect their infractions of law and ethics. In the meantime these same exponents are aiding and abetting nurses to enter the practice of anesthesia in other states, in open defiance of interstate legal requirements for the practice of medicine. This discrimination of compelling medical and dental specialists in anesthesia to conform to medico-legal reciprocity, while the nurse anesthetist is permitted to go and come in the practice of medicine as a free lance, is causing considerable resentment within the profession and some of those implicated are being given just enough rope to hang themselves.

A very interesting phase of the matter is the fact that some chartered medical schools with the recognition of their respective state boards are now impeaching their own standing by openly confessing their inability to teach the subject of anesthesia to their students. They seem to find it both impossible to educate physicians so that they are com-



petent to teach anesthesia and find it equally impossible to train internes to be anesthetists.

In view of the fact that Johns Hopkins, the U. of Indiana and the U. of Chicago have in the past, in their medical schools and hospitals produced research-work in anesthesia by fifth-year internes, it seems rather incriminating that any state university should have to employ an unlicensed person to teach anesthesia and should find it necessary to use nurse anesthetists in its clinical hospital.

Such a confession of incompetence should not go unchallenged; and the same argument applies to certain hospitals who are attempting to replace licensed medical specialists in anesthesia with nurse anesthetists.

Of course if the profession of any state wishes to sit supinely idle and see itself underhandedly socialized in the practice of medicine, surgery and dentistry, on the basis of a nurse's pay, all well and good. The profession will deserve just what it receives. The Organized Anesthetist do not intend to be caught napping.

It is rather amusing, too, to hear the protests of those who employ nurse anesthetists, when nurses invade the domain of industrial medicine and surgery or when midwives infringe on obstetricians and all the isms and fads threaten the legal control of medicine. Legalize the nurse anesthetist and the first move in throwing the legal state and interstate control of the practice of medicine and dentistry, into the discard has been made.

Any nurse who has the education, knowledge, skill and training to become an anesthetist, could just as well become a licensed physician or dentist. If the woman anesthetist is the solution, let her be a licensed physician, nevertheless. Already one-fifth of the membership of the Organized Associations of Anesthetists is composed of women-physicians. Any nurse who has not the qualifications or potentiality of becoming a licensed physician, utterly lacks the requirements for specializing in anesthesia.

In closing I may state that the medical profession of the State of New York is backing up the efforts of the Organized Anesthetists to amend the Public Health Law of New York, in this session of the Legislature, to absolutely restrict the administration of anesthesia to licensed physicians and dentists.

As soon as something really definite results, the Organized Anesthetists will have something more to say.

Cordially yours,

F. H. MECHAN, M.D.

Sec'y Ohio and Interstate Anesthetists; Editor  
Anesthesia Supplement and Year-Book.

Detroit, Mich., Jan. 11, 1917.

Dr. Frederick C. Warnshuis, Editor,  
Powers Theatre Building,  
Grand Rapids, Michigan.

My dear Doctor:

I have just read your editorial on "As Others See Us." Such action is certainly vicious, and such men should be shown up, their name should be published in the *Journal*, and they should be expelled from the State Society, that is all there is to it. We cannot afford to recognize such people as mem-

bers of a noble profession. I have been an advocate of the highest reasonable fees, but certainly a physician should earn them.

J. H. CARSTENS.

## Deaths

**Dr. P. J. Livingstone**, of Detroit, formerly of Caro was seized by apoplexy while driving his car to his home and died within a few hours. His sudden death was a great shock to his friends.

The news that rapidly spread through Cadillac on Sunday, Dec. 31, 1916, that Dr. Raphael Brodeur had suddenly dropped dead while returning in his automobile from attending church service brought surprise and grief to all of the large number who have known him. Dr. and Mrs. Brodeur had taken Mr. and Mrs. Julian Burgess on First Avenue to St. Ann's church Sunday morning and were returning with them when Dr. Brodeur's death occurred. Considerable trouble had been experienced in starting the machine at the church door and when the end of Lynn street was reached Dr. Brodeur is believed to have suffered a brief fainting spell. The car left the road and stopped in the deep snow in front of the Charles Dunham home. With the assistance of J. A. Coffey and one or two others the car was placed back on the road and the engine started. Just as he was about to start the machine Mrs. Burgess noted that Dr. Brodeur's head dropped over on the shoulder of her husband. Mrs. Brodeur spoke to him and secured a faint answer but it was evident that his life was fast slipping away and in a few moments death had come.

Dr. Brodeur has been a resident of Cadillac for over 33 years, coming to this city from LeRoy where he practiced medicine. He had passed the age of 69 years. Born in a suburb of Montreal, Canada, he secured his medical education at Victoria College at Montreal, graduating in 1873. On September 25, 1873 he was married to Miss Malvina Bieuvnu. Besides his widow Dr. Brodeur is survived by one son, Ernest R. Brodeur of Cadillac, and by two daughters, Mrs. J. T. White of Cecil Bay, Michigan and Miss Irene Brodeur of Cadillac. Two sisters, Mrs. Alexis Dame of Montreal and Mrs. Euseb Gougou of Lowell, Mass., also survive him. A brother, Nedro Brodeur dropped dead from heart failure at his home at Lorain, Ohio, just about a year ago, on December 23, 1915. Twelve children were born to Dr. and Mrs. Brodeur, nine of them having died early in life.

Quiet and unassuming, yet possessing a gentle, kindly personality, Dr. Brodeur held a high place in the hearts of his large circle of friends. He was a faithful member of St. Ann's church and was a charter member of the Knights of Columbus and of the St. John the Baptist lodge. He has served the county as coroner and the city of Cadillac as city physician.

The funeral service occurred at St. Ann's church, Wednesday morning at 9:00, the Rev. E. A. Lefebvre holding solemn high mass. The interment took place in Mt. Carmel cemetery.

## State News Notes

There were 3,373 deaths reported to the Department of State as having occurred in the State of Michigan during the month of December, 1916. This number corresponds to an annual death rate of 14.4 per 1,000 estimated population. In addition to the above, there were 291 stillbirths returned as deaths.

By ages, there were 627 deaths of infants under one year of age; 165 deaths of children aged 1 to 4 years, both inclusive; and 1,204 deaths of elderly persons aged 65 years and over. The number of deaths of infants under one year of age and the number of elderly persons show a slight increase over the number for the preceding month.

Important causes of death were as follows: Pulmonary tuberculosis, 244; other forms of tuberculosis, 26; typhoid fever, 38; diphtheria and croup, 52; scarlet fever, 26; measles, 10; whooping cough 13; pneumonia, broncho-pneumonia, 464; diarrhea, enteritis, under 2 years of age, 63; meningitis, 25; influenza, 29; cancer, 226; violence, 227.

As compared with the number of deaths for the preceding month a slight increase is noted in the number of deaths from pulmonary tuberculosis, scarlet fever, measles, whooping cough, pneumonia, meningitis, influenza, and cancer. A slight decrease is noted in the number returned from tuberculosis other than of the lungs, diphtheria and croup, diarrhea under two years, and violence.

In addition to the important causes noted above, there were eight deaths returned to the Department as having been caused from poliomyelitis.

The different State Institutions, (Hospitals and Asylums, reported deaths as follows: Traverse City, 21; Ionia, 1; Lapeer, 8; Newberry, 5; Pontiac, 12; Ann Arbor, 19; Wayne County House, 52.

The distribution of deaths referred to above by counties and by cities as well as by the most important causes of death may be seen in the tables shown in the Monthly Bulletin of Vital Statistics, which is published by the Department, and is for free distribution.

Upon referring to the table of counties we find the greatest mortality rate is for the county of Luce. This county shows a rate of 40.0 per 1,000 estimated population. Wayne county, with a rate of 45.6 shows the highest birth rate for the month.

In the table of cities, we find that Ann Arbor shows the highest death rate for the month. The rate, 36.9, however, includes deaths of nonresidents. If such deaths were deducted the rate would not exceed the rate for all cities to a very great extent. Detroit City, with a rate of 41.3 per 1,000 estimated population, shows the highest birth rate for the month of cities over 5,000 population.

There were 6,968 births returned to the Department as having occurred during the month of December. This number corresponds to an annual birth rate of 26.6 per 1,000 estimated population. An increase of 564 births is noted as compared with the month immediately preceding. In addition to the above, there were 280 stillbirths returned as births.

The following program was carried out at a joint meeting of the Boards of Michigan Insane hospitals held in Lansing on January 18th:

Chairman—Hon. Charles F. Backus, President Board of Trustees Ionia State Hospital.

"The Needs and Aims of the Joint Board of Trustees"—Hon. Thos. Conlin, Member Board of Trustees, Newberry State Hospital.

"Future Developments at the Michigan Home and Training School of Importance to the State Insane Hospitals"—Dr. H. A. Haynes, Medical Superintendent.

"Future Developments at the Michigan Farm Colony for Epileptics of Importance to the State Insane Hospitals"—Dr. Robert L. Dixon, Medical Superintendent.

"Pre-Commitment Activities and After-Care: Limitations and Possibilities"—Dr. E. A. Christian, Medical Superintendent, Pontiac State Hospital.

"State Hospital Laboratories"—Dr. Albert M. Barrett, Medical Director, State Psychopathic Hospital, Ann Arbor, and Pathologist to the State Insane Hospitals.

The Detroit Physicians Business Bureau is having printed in book form, credit information on over 8,000 Detroit families. These are on the press and will soon be ready.

They are printing a limited number for members only, so if you want one notify the Bureau at once.

Due to the advance in labor, paper, etc., the cost of these books will be \$2.00 each.

If any of your accounts in the hands of the Bureau are not producing results as speedily as you desire, report them with all available information in writing to Dr. Walter Ford, care of the Bureau office.

Medical fees in Detroit have always been lower than in other cities of similar size. Due to the rapid increase in the cost of drugs, surgical instruments and supplies as well as living expenses, many physicians felt it necessary after January first, to make their minimum charge two to three dollars for day calls, with an extra charge for calls after six p. m.

FOR SALE—Cincinnati, Ohio. \$7,000 Medical Practice, and residence containing elegant offices, by physician in general practice, established twenty years, and ready to retire at 48 years of age. Practice still increasing. Excellent property in good condition; large garage on premises. A thorough inspection solicited. Write for details, then come and see. Price, \$10,000. P. O. Box 32 Sta. A.

The Annual Congress on Medical Education, Public Health and Medical Licensure will be held in Chicago in The Florentine Room of the Congress Hotel on Monday and Tuesday, February 5 and 6. All those interested are cordially invited to attend.

Dr. Gale W. Huber, receiving physician of the Detroit Receiving Hospital, retired from that position on January 1st. He has removed to Illinois where he will take up private practice.

Dr. Archibald D. McAlpine of Detroit announces the removal of his office to the Washington Arcade building.



Dr. P. W. Wilson, formerly of Negaunee, has removed to Muskegon, where he will enter general practice.

President A. P. Biddle tendered a dinner to the members of the Council at the Statler Hotel on the evening of January 23d.

Dr. Robert MacGregor has assumed his duties as prison physician at Jackson.

Dr. B. E. Biggs of the Michigan Home & Training School at Lapeer has been confined to bed with the rheumatism for several weeks.

Dr. M. E. Wilson, Lapeer, Michigan, is convalescing from an illness which has necessitated her confinement to bed or room for the past two months.

Drs. J. H. and D. H. Burley of Almont report a nice business in their new private hospital in the same city.

Dr. Paul Thompson of Lapeer is able to be around again after quite a long battle with the streptococcus rheumaticus.

The Escanaba Isolation Hospital has been established by the city authorities.

## *County Society News*

### CALHOUN COUNTY

To the Officers and Members of the Calhoun County Medical Society:

The Society closes the year and comes to this Fortieth Annual Meeting under circumstances most pleasant. In many ways, with succeeding years, our Society has followed a healthy growth in several directions, and this year has been no exception to the rule.

The program committee has provided for fourteen meetings, and at these meetings twenty different out-of-town essayists have appeared. Geographically, they have come from both east and west, numbering both New York City and the Pacific Coast. Detroit and Chicago have furnished most of the talent, but Salt Lake City gave us an excellent paper and near-by cities have not been omitted. This great wealth of entertainment has been most enlightening, and we doubt if any other County Society, has been more highly favored; and for the number of members enrolled, we have had more subjects, I feel safe in saying, than has any other County Society in the State. These have proven very entertaining as well as instructive, but have not been as well discussed by the members of the Society as they should have been, and thus the individual members have lost very much good which might otherwise have been enjoyed.

Only two members of our own Society have prepared papers during the entire year, and but two other members have appeared before the Society in any capacity. These two reported interesting cases. At one meeting, which was very beneficial,

was given a program by laymen of this city. It might be well to repeat this at some future date.

Two deaths have occurred in our membership during this year, removing our valued members, Dr. John L. Ramsdell of Albion, and Dr. L. S. Joy of Marshall. Several new members have been admitted, and but for the occurrence of these two deaths, we would today number one hundred. Instead, we close the year with a membership of ninety-eight, and it is to be hoped this may be maintained to the close of the coming year; but to do this new recruits must be added. Already two or three have removed from our midst and will be asking for transfers very soon. Our membership is widely scattered geographically. We are represented as far away as New Zealand, where Dr. Peter M. Keller resides, as one of our loyal members, while Dr. Roy E. Fox is in the Canal Zone.

The financial balance at the close of this year is a trifle more than at the beginning. This is entirely due to the fact that our essayists have been generous, in many instances accepting no fees, nor remuneration for their expenses. Our dues for the coming year will be five dollars and fifty cents, an advance of fifty cents due to that much increase in the dues to the State Society.

Our Bulletin has been published regularly this year, ten issues having appeared and this was without advertising, the expense having been paid wholly by the Society. Whether it is worth while to continue this plan for another year, the Society should decide at this meeting.

A Tuberculosis Clinic has been established during this year, and how well that has succeeded and how much good has been accomplished, a report from the Tuberculosis Committee should reveal.

The question of establishing a business bureau came up for consideration, but was deemed inadvisable at the time, and the matter was dropped.

#### RECOMMENDATIONS FOR THE COMING YEAR

Your Secretary would recommend that the program committee endeavor to secure more papers from the members of the Society, whether on original subjects or by way of reporting cases from time to time. The members should also be encouraged to enter more freely into discussion of papers presented. Nothing encourages an essayist more than to have his subject heartily discussed by the members in attendance.

We would again call attention to the fact that our by-laws need correcting, and it seems this might well be taken up at an early date by the new administration.

It has occurred to the Secretary, that possibly some plan might be arranged, whereby a permanent repository for a Society library could be established. If this can be done our Society might purchase a stereopticon and have it always at our disposal, without the necessity of infringing upon the generosity of others.

We would also call attention to the fact that industrial health insurance is coming to be a live subject for discussion by our profession, and we believe the time is not far distant when something of this sort will be brought forcibly to our attention. We believe it would be well for this Society to have a committee appointed to keep under observation this subject, and to be ready with recom-

mendations whenever the same shall come up for discussion, as it must in the near future.

And, finally, after five years of service, your Secretary calls attention to the fact that the duties of the office have come to be much more arduous and to require considerably more time than was necessary in preceding years. The Society has grown from a membership of sixty-five, with four meetings per year, to its present proportions of one hundred members, holding fourteen meetings this year, and publishing a Bulletin of ten issues. He feels that there should be a rotation in this office and asks the Society to consider another for the office for the ensuing year. The duties and associations have been most pleasant in every respect, and very profitable, but your Secretary would be grateful for a release from these duties.

Fraternally submitted,

A. F. KINGSLEY, Secretary.

### CHIPPEWA COUNTY

A regular meeting of the Chippewa County Medical Society was held at the Park Hotel, Sault Ste. Marie, on Wednesday evening, January 3.

The new president, Dr. J. J. Lyon, gave an address on the welfare of the local society and the personal interests of the local practitioners in our society and its meetings.

Dr. Lyons also read a very interesting paper on practice and therapeutics. The paper was greatly enjoyed and fully discussed by all members present.

R. C. WINSLOW, Secretary.

### KENT COUNTY

The first meeting of the Kent County Medical Society for 1917 was held January 10th with the newly elected President, Dr. F. J. Lee in the chair. Plans were outlined for a banquet—some time in February—which will be purely social and frivolous. The society endorsed Dr. C. C. Slemons for member of the State Board of Health. A resolution was then passed endorsing the work of the anti-tuberculosis survey and urging that more funds be appropriated for the work this year. A press censorship committee was also created during the business of this busy evening. Dr. H. S. Collisi reported a case of post-operative tetanus; and Dr. Frank Smithies of Chicago then read a paper on "Benign Pyloric Stenosis and its Clinical Management," illustrating his remarks with the lantern.

### LAPEER COUNTY

The regular meeting of the Lapeer County Medical Society was held at the Hotel Elaine, Lapeer, Mich., on Tuesday, Jan. 9, 1917.

The members of the Society were the guests of the Lapeer City doctors at a nicely planned Luncheon which proved to be a grand success in every way.

Fourteen of the active members were present and several visitors who also helped to make the discussions more interesting.

The regular election of officers was held and the following officers were installed for the ensuing year:

President—Wm. Blake, Lapeer, Mich.

Vice President—I. E. Parker, Dryden, Mich.

Re-elected Sec'y-Treas.—J. H. Douglass, Lapeer.

Alternate Delegate—Peter Stewart, Hadley, Mich.

Dr. Walter J. Wilson of Detroit, our visiting speaker for the occasion was then introduced to the society and he gave us a very interesting talk on the Diagnosis, Prognosis and Treatment of the Common Heart Diseases.

He handled the subject in a very capable manner, and the discussions that followed made the meeting one of great benefit to all those present.

The next meeting will be held at the Burley Hospital, Almont, Mich. on the second Tuesday in April and it is hoped that the attendance will increase in numbers the same as our last year.

J. H. DOUGLASS, Secretary.

### SANILAC COUNTY

The sixteenth annual meeting of the Sanilac County Medical Society was held in the Court House, Sandusky on Thursday, Dec. 28 for the purpose of electing officers for the ensuing year and any other business that might be brought before the meeting. Officers were elected as follows:

President—Neil J. McColl, Crosswell.

Vice-President—Dr. J. C. Webster, Peck.

Secretary-Treasurer—Dr. J. W. Scott, Sandusky.

Member Medico Legal Committee—Dr. D. D. McNaughton, Argyle.

Delegate State Society—Dr. H. H. Angle, Snover.

Alternate—Dr. G. S. Tweedie, Sandusky.

Dr. B. E. Brush, Port Huron, was present and gave a very able paper on "Acute Abdominal Symptoms."

Dr. H. Learmont, Crosswell, gave a very instructive talk on "Ulcerative Endocarditis."

Both paper and talk were well received and elicited considerable discussion among the members. A motion was made and passed to the effect that the obstetrical fee for uncomplicated normal cases be \$15.00 in lieu of \$10.00, subsequent calls extra at usual rates. Another motion was passed that the annual dues of the Society be \$1.50 instead of \$1 which will make the total dues for the State and County Societies for next year \$5.00 instead of \$4.00.

J. W. SCOTT, Secretary.

### ST. CLAIR COUNTY

The St. Clair County Medical Society held its regular monthly meeting Thursday evening Dec. 21, 1916, at the Hotel Harrington, Port Huron, Mich., at which time the annual election of officers was held. Music for the evening was furnished by Drs. Moffett, "Cello," Lohrstorfer, "Violin" and Prof. Cawthorn at the piano.

Vocal solo by Dr. C. Stockwell.

French reading by Dr. Cote.

Election of officers as follows:

President—Dr. Chester, Emmett.

Vice-President—Dr. McColl, Port Huron.

Secretary-Treasurer—Dr. W. W. Ryerson, Port Huron.

Delegate—Dr. S. K. Smith, Port Huron.

Alternate—Dr. R. K. Wheeler, Port Huron.

Dr. Duncan Campbell of Avoca was elected a member of the Society.



Dr. McKenzie was appointed by the President to read a paper at the next meeting. Dr. Clancy to open the discussion.

The Society voted to hold a meeting every two weeks.

W. RYERSON, Secretary.

## Book Reviews

**CONSTIPATION, OBSTIPATION AND INTESTINAL STASIS** by Samuel Goodwin Gaut, M.D., LL.D. Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Second edition enlarged. Octavo of 584 pages, with 258 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$6.00 net; Half Morocco \$7.50 net.

The subject of constipation is a broad one, and covers a field which is of interest to both physician and surgeon. The object of this volume is to present to the profession a practical treatise on the etiology, pathology, symptoms, diagnosis and treatment of constipation and obstipation. A careful perusal of the volume impresses one with its intrinsic value and scientific as well as practical presentation of the subject. Its clarity in style is refreshing. Each subject discussed is presented to the reader so that a penetrating insight is obtained and fixed, tenable ideas are acquired. Thereby one is enabled to apply the information in his daily work.

No practitioner can be without this volume and be content that he is doing all that can be done for his patient. The formulae alone are surely bound to enable one to surmount many trying conditions. The non-operative treatment will enable the physician to accomplish much and often avoid surgical interference.

It is certain that just as soon as the individual physician realizes the scope and extent of the diseases that are produced by abnormalities of the lower end of the intestinal tract and accords his patient more than superficial treatment the sooner will they cease seeking relief from advertising quacks and charlatans. Gant's work studiously perused and applied will enable the doctor to render that service of efficient degree to each individual consulting him. It is a most valuable, revised to date addition to our literature.

## Miscellany

### A HANDSOME BIOLOGIC HANDBOOK.

Every reader of this *Journal* should write to The Abbott Laboratories, Chicago, for a copy of its beautiful new booklet, entitled "Biologic Remedies and How to Use Them." This is a good deal more than an advertising pamphlet; in fact, it is a real textbook of biologic therapy in which the essential facts are presented in simple, straightforward, untechnical English, making the topic intelligible and interesting to any physician. This booklet contains about seventy pages and is illustrated with half-tone pictures and colored plates.

The first chapter presents the fundamental principles of biologic therapy; and there are also chap-

ters describing the manufacture and uses of bacterins, antitoxins, serums and vaccines. If you want to know when to give a bacterin or antitoxin, how to inject it, the dosage proper in each case, the reaction likely to follow, or why you sometimes fail, you will get the help you want here. One of the most useful parts of the book is a department of Clinical Applications, in which the various disease conditions are taken up in alphabetical order and suggestions given for their treatment with biologic remedies. There is a very complete index, making the contents available for ready reference.

The book, as we have already said, will be sent free to anyone who will send his name to The Abbott Laboratories. Every user of biologic remedies should secure a copy and carry it in his pocket or satchel for help in emergencies.

*More Misbranded Nostrums.*—The following "patent medicines" have been held misbranded under the Federal Food and Drugs Act, chiefly because of false and unwarranted therapeutic claims. Mrs. Winslow's Soothing Syrup, declared to contain 5 per cent. alcohol and 1/10 grain morphine sulphate to each fluidounce together with oil of aniseed, caraway, coriander, jalap, senna and sugar syrup. (as now marketed the preparation contains no opiate). Johnson's Iodized Extract of Sarsaparilla found to be a simple vegetable preparation with only an appreciable amount of potassium iodide. Matu-sow's Nulfey contains 51.8 per cent. sodium salicylate. An alkaloid, probably berberine, and emodin were present (*Jour. A.M.A.*, Dec. 16, 1916, p. 1865).

*Bromin-Iodin Compound.*—This preparation was submitted to the Council on Pharmacy and Chemistry with the following formula: "Iodin Gr. 1, Bromin Gr. ¼, Phosphorus Gr. 1/100, Thymol Gr. ⅓, Menthol Gr. ⅓, Sterilized Oil fl. dr. 1." According to the promoters Bromin-Iodin Compound is "A Powerful Anti-Tubercular Agent for Hypodermic Use in Pulmonary and Laryngeal Tuberculosis." The Council declared the preparation ineligible for New and Nonofficial Remedies because the "formula" was impossible if it is intended to indicate the composition of Bromin-Iodin Compound; and meaningless if it is intended to indicate the ingredients used in the manufacture; and also because there was no satisfactory evidence for its therapeutic efficiency (*Jour. A.M.A.*, Dec. 23, 1916, p. 1956.)

*Castrox.*—Castrox is a castor oil emulsion claimed to contain castor oil 50 per cent., glycerin 10 per cent. with water and emulsifying agents. It was said to be prepared by a "unique three day process with special apparatus and is more than 'just an emulsion.' It is a mutual emulsion, for the oil and aqueous solution have been united without 'forcing.'" The Council held Castrox to be an unessential modification of an established article, marketed under a proprietary name and with claims which give a false value to a simple castor oil emulsion, and therefore not admissible to New and Nonofficial Remedies (*Jour. A.M.A.*, Dec. 23, 1916; p. 1956.).

*More Misbranded Nostrums.*—The following "patent medicines" were found misbranded under the Food and Drugs Act in the main because unwarranted and false therapeutic claims were made

for them. Smith's Kidney Remedy, found to be a hydro-alcoholic solution containing glycerin, potassium acetate, trace of alkaloid, laxative extractive plant drugs. Hill's Syrup of Tar, Cod-Liver Oil Extract and Menthol, essentially a sweetened hydro-alcoholic solution containing small amounts of chloroform, menthol, morphine and tar; ipecac, tolu, cannabis indica and wild cherry were indicated; cod-liver oil was absent. Mag-No Brand Liniment, essentially an aqueous solution of ammonia, flavored with sassafras oil and colored. Radway's Sarsaparillian, essentially a watery-alcoholic solution of sugar, potassium iodid, arsenic, a trace of alkaloids and certain plant substances. Dr. Shoop's Diphtheria Remedy, consisting of sugar syrup with a very small amount of soluble chromate, glycerin and salicylic acid. Dr. Shoop's Preventics, a tablet containing a small amount of unidentified vegetable extractive matter. Hot Porous Plaster, essentially a capsicum plaster. N. H. Downs Vegetable Balsamic Elixir, a sweetened solution of opium, ipecac, glycerin, and small amounts of calcium, potassium, and iron compounds, flavored with anise. Kopp's Baby's Friend, containing 8.5 per cent. alcohol and one-eighth grain morphine sulphate to the fluidounce. Prof. Hoff's Prescription, formerly known as Hoff's Consumption Cure. Dr. Haynes' Arabian Balsam, apparently a mixture of cotton seed oil, turpentine and oil of cumin. Russia Salve, sold as a cure for conditions ranging from "cancers" to "mosquito bites" and from "swelled nose" to "ingrowing nails" (*Jour. A.M.A.*, Dec. 23, 1916, p. 1956-1957).

*Lactcol.*—This appears to be a lactic acid ferment preparation. The advertising material is of the usual extravagant character. The preparation is made in Paris, since the bacteria lactic acid ferment preparations are short lived, may be inactive by the time it is used here (*Jour. A.M.A.*, Dec. 23, 1916, p. 1959).

*Sodium Cacodylate in Syphilis.*—While Nichols has shown that sodium cacodylate is worthless as a spirocheticide, it is still being used in the treatment of syphilis, and it is the essential constituent of venarsen, a proprietary syphilis remedy. As a result of extensive clinical trials, Dr. H. N. Cole concluded that sodium cacodylate has no spirocheticidal value. At the utmost it has perhaps a slight action on the papular and nodular syphilids, but in no case is this effect to be compared with that produced by mercury and potassium iodid. In cases of syphilis with mucous patches sodium cacodylate is worse than useless (*Jour. A.M.A.*, Dec. 30, 1916, p. 2012).

*Tanret's Pelletierine.*—The exact composition of Tanret's Pelletierine is not known, but is believed to be similar to the pelletierine tannate of the U. S. P. This is said to be a variable mixture of the tannates of four alkaloids of pomegranate. As only two of the alkaloids have tenifuge properties the activity of the different preparations varies with the proportion of these alkaloids which are present (*Jour. A.M.A.*, Dec. 30, 1916, p. 2030).

*O-Do-Cure.*—The A.M.A. Chemical Laboratory reports that a solution essentially similar to this, "perspiration remedy" may be made thus: salicylic

acid 1 grain, boric acid 30 grains, alcohol 3 fluidrams, perfume sufficient, water to make 1 fluidounce. (*Jour. A.M.A.*, Dec. 30, 1916, p. 2030).

*Mercuric Benzoate.*—When mercuric benzoate is dissolved in sodium chloride solution for injection purposes a complex mercuric compound is produced in which the mercury is a part of the acid radical. It is safe to assume that the therapeutic effect of a given weight of mercury as mercury benzoate in a stated volume of sodium chloride solution will be the same as that of the same weight of mercury in the form of mercuric chloride in the same volume of sodium chloride solution (*Jour. A.M.A.*, Dec. 30, 1916, p. 2030).

*Quinine Injection.*—By taking proper precautions the number of cases of abscess formation and necrosis from the injection of quinine may be greatly reduced, but the danger of their occurrence cannot be entirely eliminated. For this reason all authorities agree that the administration of quinine by injection should be confined to the most urgent cases of pernicious malaria. The two most important precautions are, that the injection must be intramuscular and that the solution should be dilute—not stronger than ten per cent. The best salts are quinine dihydrochloride and quinine and urea hydrochloride (*Jour. A.M.A.*, Dec. 30, 1916, p. 2030).

*The Status of Antipneumococcus Serum.*—The injection of the proper antipneumococcus serum in pneumonia caused by pneumococcus Type 1 is believed to be beneficial, but the serum treatment of pneumonia is still in the experimental stage. The pneumococci fall into various groups according to their immunologic relations and the first requisite for a rational use of the serum treatment of pneumonia is the determination of the particular type of the pneumococcus concerned in a given case (*Jour. A.M.A.*, Dec. 30, 1916, p. 2030).

*Iron Cacodylate.*—While manufacturers appear most ready to take advantage of the present interest in iron cacodylate by offering this in the form of ampules, etc., they have given little help to the A.M.A. Chemical Laboratory toward the establishment of standards for this arsenic compound. Manufacturers are ever ready to sell drugs of all sorts, but in view of the small demand for little used drugs, they cannot or will not safeguard the identity and purity of such drugs (*Jour. A.M.A.*, Nov. 25, 1916, p. 1593).

*Mayr's Wonderful Stomach Remedy.*—More than a year ago the proprietor of Mayr's Wonderful Stomach Remedy pleaded guilty in the federal court to the charge that the claim that the nostrum was a cure for gallstones, appendicitis and all stomach, liver and intestinal diseases was false and fraudulent. Nearly a year later a placard over the store window of the Mayr establishment the following appears: "Mayr's Wonderful Stomach Remedy, is the Only Known Cure For All Stomach, Liver and Intestinal Complaints. One Dose Will Prove It." The federal Food and Drug Act should have its scope extended so that all advertising for a product shall come under the purview of the act (*Jour. A.M.A.*, Dec. 9, 1916, p. 1774).



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### *Original Articles*

#### THE MEDICAL LIBRARY OF THE UNIVERSITY OF MICHIGAN AND ITS VALUE TO THE PRACTITIONERS OF MICHIGAN.\*

ALDRED SCOTT WARTHIN, Ph.D., M.D.

Professor of Pathology and Director of the Pathological Laboratories in the University of Michigan, Ann Arbor.

An article upon the Medical Library of the University of Michigan written by Dr. George Dock, in 1905, is prefaced with the following paragraph: "The Medical Library of the University of Michigan is fifty years old; it contains more than 13,000 volumes, and is, therefore, a 'large' medical library. These facts warrant, perhaps even demand, some account of the condition and work of the library."

In the eleven years since Dr. Dock's article, thus prefaced, was written this library has been more than doubled in content of volumes, these now numbering about 30,000; and its importance as a reference medical library of the first rank has, therefore, been correspondingly increased. Leaving out of consideration the six great medical libraries of the country, the library of the Surgeon-General's Office (190,300), that of the College of Physicians and Surgeons (105,510), that of the New York Academy of Medicine (100,000), the Boston Medical Library (84,000), the library of the Medical Society of the County of Kings (70,000), and the John Crerar library (65,809), the Medical Library of the College of Medicine and Surgery of the University of Michigan probably is second in rank of medical libraries belonging to teaching institutions of medicine, that of the Lane Library of Leland Stanford University holding the first place (39,500). The medical libraries of Yale (30,000) and of the University of Pennsylvania (28,315) probably closely contest this position of second rank; and it is not absolutely possible at this time

to say with accuracy whether this honor belongs to one of these or to Michigan. At any rate our medical library must be counted as one of the three greatest medical-school libraries in the country; and this position of importance becomes especially significant when the following facts are considered:

First, its relative youth of sixty-one years; secondly, its steady, albeit slow growth as a part of the teaching equipment of the State University. Without any special endowment, without any gifts of magnitude, this library has seen a continued healthy growth proportionate to the development of the resources of the State of Michigan and that of the State University as a whole. Like the Medical College itself, it occupies a unique position as a monument to a State in which education and the means of education have always wisely been fostered. That it should outrank the medical libraries of the great endowed and older Eastern Universities may perhaps be partly explained by the propinquity to those schools of five of the great medical libraries mentioned above; but of the medical schools not possessing the advantages of such propinquity Michigan may well stand proudly in the first rank as possessing a medical library that, not simply from the standpoint of size, but from that of value as a reference library, must be considered as one of the most important collections of medical books in this country.

It is primarily a reference library, being made up almost entirely of sets of journals and periodicals, and monographs having vital interests to medical teachers and investigators. It contains relatively but few of the textbooks and medical writings having a more or less ephemeral value; and fewer volumes still of the older medical literature. It is preeminently a library of *modern medicine*. The evolution of modern medicine from its beginnings in the early part of the nineteenth century to the present day is represented almost completely in this collection. The development of modern cellular and chemical pathology, of bacteriology,

\*Read at the Meeting of the Medical Library Association, Ann Arbor, June, 1916.

immunology, pathological physiology and experimental medicine is practically complete in the volumes comprising this library. It is, therefore, made up almost entirely of journals and periodicals dating from or after the first quarter of the nineteenth century; and these have been chosen with care and discrimination as to their working value. The big and important journals showing the results and progress of medical research were first chosen; money has not been unwisely spent, and space has not been unwisely given to local state and medical society journals of inferior value, or to medical periodicals more or less commercialized in character. We have not had shelf room for these. The limited income, the early appropriations being very small indeed, was in reality a blessing; since, combined with the good sense of those having its early development in charge, this income has been so wisely expended. From the very first the wise policy has prevailed of making it a working library of medical research; and all who have taken part in its administration have continued this policy. Since only a few things could be obtained at a time, the best and most necessary were the ones chosen. Naturally this development as a practical research collection has resulted in a somewhat one-sided library. Preeminently a working library for the medical investigator, it is greatly lacking in its collection of medical classics, and works pertaining to the older evolution of medicine. It is not yet a library for the cultivated scholar in medicine; and its weakest point is in its lack of cultural appeal.

Reviewing very briefly the early history of the library, and borrowing the chief facts from Dr. Dock's article, we find that the first recorded appropriation for medical books amounting to the sum of \$66.00 was made in 1854; but that already in 1855 some of the best European medical journals were being taken. In 1860 twenty-four journals, most of them of the best English and foreign periodicals, were being received. But the growth for twenty years was very slow, being checked by the Civil War, so that in 1871 the medical library contained only 1,500 volumes; and at the end of thirty years, in 1884, there were but 2,626 volumes and 614 pamphlets. Until 1887 small and irregular appropriations had been made for medical books, but after that year the annual appropriation was never less than \$1,000 and has slowly increased until it has reached the present sum of \$4,000 with an additional \$500.00 from students' annual library fees. Yet a more detailed

statement of the early development Dr. Dock's article in the *Medical Library and Historical Journal* for 1905 may be consulted.

From the very beginning the wise policy had obtained of expending the meager appropriations for the best and most useful periodicals, particularly those devoted to research, rather than yielding to the temptation to purchase text-books. The foundation of a library of the greatest service to teachers and investigators was thus laid; and by 1891 sixty-one medical periodicals were being taken; but the sets, with one exception, the *Archiv für Anatomie und Physiologie*, were incomplete, beginning only with the year of the annual subscription. No serious attempt, for obvious money reasons, had been made to complete the series.

In 1892, Dr. Dock became chairman of the library committee of the medical faculty, and a period of more vigorous development began. The original policy of building up a reference library consisting essentially of the sets of periodicals most useful to the teacher and researcher was more actively pursued. By 1895, the most important periodicals at that time taken, were completed from their beginnings, and the new ones subscribed for had in many instances been purchased in full sets as to back numbers. The acquisition of important monographs, hospital reports and bulletins, transactions, *Festschriften*, etc., was also pushed as far as the still somewhat limited funds would permit. At the time of writing of Dr. Dock's article (January 1, 1905) the library had grown to 13,455 bound volumes; and two hundred and twenty-six medical periodicals were being regularly received, eighty-nine of these being complete from the beginning.

In 1908 the writer followed Dr. Dock as Chairman of the Committee on the Medical Library, and during the last eight years there has taken place the most rapid development of any period in its history. The increase in funds granted made it possible to extend subscriptions and complete practically all incomplete files. The increasing cost of binding has necessitated some discrimination as to the journals to be bound. About sixty proprietary and commercial journals previously received were rejected as unworthy the cost of binding and the shelf room. Their places were filled by the new and important journals in special fields of medicine that have come into existence during this time.

Three hundred and seventy journals of the best class were being regularly received until the interruptions resulting from the war. Of these periodicals and continuations there are



one hundred and fifty-nine in the German language (Germany, Austria, Switzerland, etc.), one hundred and thirty in English (Great Britain and colonies, United States and colonies), fifty-nine in French, ten in Italian, while the remaining fourteen are distributed through Scandinavian, Dutch, Spanish, etc.

All departments of medicine, including the most highly specialized are represented by the leading journals in English, German, French and Italian. All of the leading Archives, Beiträge, Centralblätter, Folia, Jahresberichte, Jahrbücher, Journals, Revues and Zeitschriften are present in complete series, as are also the best of the weekly and monthly journals. Likewise, the publications of all important medical societies and associations in these three languages are comprised in this collection. No attempt has yet been made to build up sets of the minor provincial journals, or of the transactions of many societies of secondary importance. The collection is still deficient in Spanish and Spanish-American medical literature, as it is also in the medical literature of the Netherlands. It also lacks complete sets of many of the smaller and earlier American medical journals, particularly the Southern ones. The great majority of its wants, however, are fortunately now such as to be of little value to the medical investigator.

It must be emphasized here that the full importance of the Medical Library of the University of Michigan can be realized only when it is considered in its relation to the University General Library of 352,718 volumes (1915) of which it forms an integral part. From the medical collection proper are excluded many journals in chemistry, physics, pharmacy, sanitary engineering, anthropology, botany, biology, psychology, psychiatry, dentistry, sociology, etc., that should be included in any medical library built up as a complete unit separated from such affiliations with other departmental libraries. The Chemical Library, the General Science Library, that of the College of Dentistry, the collection in the Psychopathic Hospital, etc., as well as a library of several thousand volumes in the School of Homeopathy greatly increase, if they do not double, the accessible library content of medical material. Were these counted as a part of the medical book material, as they practically are, this library would stand sixth in rank of all American medical libraries. It has always been the policy of the library authorities to discourage the purchase of duplicates out of any library appropriations, hence the distribution among these

various departments of the journals most suited to their needs. This has been of advantage in building up a much larger general collection than would have resulted otherwise. As these various departmental libraries, with one exception, are all on the campus near the General Library and Medical College, the inconvenience that might result from such a distribution is not felt. Duplicate sets of journals can, however, be purchased out of departmental budgets (current expenses) when these are especially desired. This will become especially necessary in the case of the clinical departments of the University Hospitals located at some distance from the campus libraries. Duplicates of many of the best current periodicals in English are already kept there.

In addition to the periodicals and continuations the library has also a very complete collection of general works of reference, encyclopedias, dictionaries, indices, bibliographies, reports of bulletins of hospitals, reports and transactions of societies, handbooks, systems, and other standard works of reference. The collection of *Festschriften*, *Arbeiten*, *Contributions*, *dissertations*, *monographs*, etc., has also been greatly increased during the last eight years.

Text-books are now being purchased from the fund made available from the students' fees, each medical student paying a two-dollar library fee annually. It seemed but fair to use this fund in purchasing new text-books as they are published, giving the student the opportunity to examine these before purchasing for himself or to use them as he desires. During the last three years the current text-books in English have been purchased on this fund, and the needs of the medical undergraduates have been more satisfactorily met. This policy has also undoubtedly increased the student use of the medical library.

In addition to the general policy of creating first a reference library for the medical teacher and investigator the writer has during the eight years of his chairmanship on the Medical Library Committee endeavored to extend its field of usefulness by increasing its cultural appeal to the medical students. Its one-sided development as a reference library makes it preeminently a library for the medical researcher rather than a library for the cultivated scholar in medicine. It has failed in one just as important function, its lack of cultural influence upon the students who make use of it. This defect had been recognized by Dr. Dock during his service on the Medical Library Committee, and to remedy

it he laid the foundations of a good working collection of medical history. Of the older medical literature and the ancient classics the library possessed but few examples, most of these having been acquired by chance gift. There never had been any funds to use for the building-up of this side of the library's function; but with the small amount that he could take for this purpose Dr. Dock gradually secured the best of the medical histories, a number of biographies, and other general works in this particular field. Of great importance was the securement through his influence, of a gift of one thousand dollars from the Hon. Peter White, than a University Regent, to be used towards the development of a collection of the older medical writers. Only one book, a copy of Harvey's "De Motu Cordis," 1628, had been ordered upon this fund, but not paid for, when Dr. Dock left the University.

The use of the Peter White fund has, therefore, been left to the writer; and through it two hundred and seventy-two volumes representing medical landmarks of all periods have been purchased, in the form of original editions, commentaries, monographs, etc., so that from this material alone it is now possible to conduct a very satisfactory seminary course in medical history. As our curriculum does not include the teaching of medical history the writer has carried this out in the form of an elective Journal Club course in the Junior year as a part of the staff work in the department of Pathology. These students have had direct access to the medical stacks; they have come into personal contact with the material; and to some of them this excursion into purely cultural fields has been an inspiration, enriching their intellectual lives.

Another valuable gift in the same field is a recent one from Mr. A. M. Todd, of Kalamazoo, including fine copies of the earliest editions of Hippocrates, Galen, and Avicenna and a number of works on alchemy. This gift adds greatly to the value of the medical history section. Other additions have been made in gifts, chiefly of single volumes, and by purchase, a small sum being applied each year to this department. The earlier gifts in this field are mentioned by Dr. Dock in his article. The development of a collection on tuberculosis has also been a feature of the last eight years.

The Medical Library now occupies the entire fourth floor of the north stack and a part of the same floor of the south stack in the General Library building. The Homeopathic Library is on the floor above it; the majority

of the books on Hygiene, Bacteriology, etc., are in the Hygienic Library in the Medical building, and each sub-department in the Medical School has a small working library connected with its laboratory. Sets of journals are included in some of these departmental libraries; but for many reasons, difficulty of administration, increased wear and tear, excessive loss, inconvenience to others, danger of fire, etc., these small departmental libraries have come to be somewhat of a problem, and should be restricted to duplicates. Bound sets of periodicals of interest to a number of workers should not be kept in them.

In the main library the medical books are in fire-proof stacks, well-lighted and well-ventilated, with plenty of working room in the stacks themselves. There is a small reading-room for medical students only; in this the current periodicals are kept. In the larger Upper Reading Room there is a separate medical card catalogue and such general works of reference as the Index Medicus, Surgeon-General's Catalogue, etc. All of this is now temporary and will be changed within the year. In the new University Library, the construction of which is now progressing, the Medical Library will have greatly increased facilities, a larger reading room, seminary and exhibition room, and faculty working room in bays along the stacks.

There is no medical librarian, and no medical-trained attendants. This is at present our greatest weakness, and undoubtedly has hindered greatly the utilization by the medical students of the valuable resources offered by the book collection. This defect will also be remedied when the library is in its new quarters. In the meantime there has been a noticeable increase in the number of students making use of the medical books. Books can be drawn out over night and Sundays. Works especially recommended or referred to by teachers are gathered together at the distributing desk or made immediately accessible to the students in other ways. Thesis and library research work in some departments as a new teaching development also stimulates the students to an increased use and appreciation of the library.

The Medical Library as a part of the state system of education endeavors also to be of practical use to the practitioners of the state. Books can be drawn out for a limited time by any citizen of the state, the cost of transportation to be borne by the reader. It is also possible for non-resident physicians to obtain references and abstracts by the payment of a



nominal sum covering the actual time employed in making these. The Medical Library can do for the practitioners of Michigan what the Surgeon-General's Library can do for investigators throughout the country. Should the practitioner come to the library to do his own abstracting he is given full privileges of the library on the presentation of his card. In every possible way we wish to make the medical library of practical value to the physicians of the state.

The Medical Library of the University of Michigan occupies, therefore, a unique position among the medical libraries of the country. Located in a small city in one of the central states, without endowment and without great gifts, with but a moderate annual budget, developing as an essential and logical part of the school system of the state, it has grown into one of the most important medical reference libraries of the country, in response to the ideals of medical teaching and research held by the men responsible for its development. If to this influence there can be added that of a broader cultural stimulus to the minds of the medical students who take advantage of its resources it will become truly a great medical library.

#### LIST OF THE MOST IMPORTANT PERIODICALS AND CONTINUATIONS FOR WHICH THE MEDICAL LIBRARY OF THE UNIVERSITY OF MICHIGAN SUBSCRIBES

Abhandlungen z. geschichte d. medicin.

l'Académie de Médecine, Bulletin.

Alkoholfrage.

Allgemeine zeitschrift fuer psychiatrie.

American Atlas of Stereoroentgenology.

American Journal of Anatomy.

American Journal of Gastro-enterology.

American Journal of Insanity.

American Journal of Nursing.

American Journal of Obstetrics.

American Journal of Ophthalmology.

American Journal of Physiology.

American Journal of the Medical Sciences.

American Labor Legislation Review.

American Medical Association Journal.

American Practitioner and News.

Anatomical Record.

Anatomische hefte.

Anatomische hefte, Ergaenzungs hand.

Annales de dermatologie et de syphiligraphie.

Annales de gynécologie et d'obstetrique.

Annales d'electrobiologie.

Annales d'hygiene publique et de medecine legale.

Annali d'igiene sperimentale.

Annals of Ophthalmology.

Annals of Otology.

Annals of Surgery.

Arbeiten a. d. Kaiserlichen gesundheitsamt.

Arbeiten a. d. neurologischen institut a. d. Wiener Univ.

Archiv f. anatomie und physiologie, Aht. 1-2.

Archiv f. anatomie und physiologie, Supplement.

Archiv fuer augenheilkunde.

Archiv fuer dermatologie nnd syphilis.

Archiv fuer die gesamte physiologie.

Archiv fuer die geschichte d. medizin.

Archiv f. experimentelle pathologie.

Archiv f. gynaekologie.

Archiv f. hygiene.

Archiv f. kinderheilkunde.

Archiv f. klinische chirurgie.

Archiv f. laryngologie u. rhinologie.

Archiv f. mikroskopische anatomie.

Archiv f. ohrheilkunde.

Archiv f. ophthalmologie.

Archiv f. pathologische anatomie und physiologie.

Archiv f. protistenkunde.

Archiv f. psychiatrie.

Archiv f. Schiffs-u. tropen-hygiene.

Archiv f. schiffs-u. tropen-hygiene and heihefte.

Archiv f. verdauungs-krankheiten.

Archiv f. wissenschaftliche und praktische thierheilkunde.

Archives d'electricite medicale.

Archives de medecine experimentale d'anatomie pathologique.

Archives de medecine d'enfants.

Archives de parasitologie.

Archives des maladies du coeur, des vaisseaux et du sang.

Archives der sciences biologiques.

Archives d'ophthalmologie.

Archives générales de medecine.

Archives internationales de laryngologie.

Archives internationale de neurologie.

Archives internationales de pharmacodynamie et de therapie.

Archives internationales de physiologie.

Archives italiennes de biologie.

Archives mensuels d'obstetrique.

Archives of Internal Medicine.

Archives of Ophthalmology.

Archives of Pediatrics.

Archives of Roentgen Rays.

Archivio di antropologia criminale e di med. legale.

Archivio di fisiologia.

Archivio italiana di anatomia di embriologia.

Archivio per le scienze mediche.

l'Association des anatomistes, comptes rendus.

Beitraege z. augenheilkunde.

Beitraege z. experimentelle therapie.

Beitraege z. geburtsheilfe.

Beitraege z. klinik der tuerklos & Supplement.

Beitraege z. klinische chirurgie.

Beitraege z. pathologischen anatomie und allgemeine pathologie.

Berliner klinische wochenschrift.

Biochemische zeitschrift.

Boston Medical and Surgical Journal.

Brain.

British Journal of Children's Diseases.

British Journal of Dermatology.

British Journal of Surgery.

British Journal of Tuberculosis.

British Medical Journal.

Bulletin general de therapeutique.

Bulletin Mensuel.

Canada Lancet.

La Cellule.

Centralblatt des Myologes.

Centralblatt fuer allgemeine pathologie und pathologische anatomie.

Centralblatt fuer allgemeine pathologie und pathologische anatomie, Ergaenzungsheft.

Centralblatt fuer bakteriology, Aht. II.

Centralblatt fuer bakteriology, Originale.

Centralblatt fuer bakteriology, Referat.

Centralblatt fuer biochemie und biophysikal.

Centralblatt fuer die grenzgebiete der medizin und chirurgie.

Centralblatt fuer praktische augenheilkunde.

Charite annalen.

Congress f. innere medizin. Verhandlungen.

Correspondenz-blatt fuer schweizer aerzte.

Dermatologische wochenschrift.

Deutsche chirurgie.

Deutsche gesellschaft f. gynaekologie. Verhandlungen.

Deutsche klinik.

Deutsche klinik an eingang des 20 jahrhndert.

Deutsche kongress f. innere medizin. Verhandlungen.

Deutsche laryngologische gesellschaft. Verhandlungen.

Deutsche medicinische wochenschrift.

Deutsche otologische gesellschaft. Verhandlungen.

Deutsche pathologische gesellschaft. Verhandlungen.

Deutsche roentgen gesellschaft. Verhandlungen.

Deutsche tierärztliche wochenschrift.

Deutsche zeitschrift fuer chirurgie.

Deutsche zeitschrift fuer nervenheilkunde.

Deutsches archiv fuer klinische medizin.

Dublin Journal of Medical Sciences.

Edinburgh Medical Journal.

Edinburgh obstetrical society transactions.

Encéphale.

- Epidemiological society of London. Transactions.  
 Ergebnisse d. anatomie.  
 Ergebnisse der inneren med. u. kinderheilkunde.  
 Ergebnisse d. physiologie.  
 Folia haematologia, Abt. I.  
 Folia haematologia, Abt. II.  
 Folia Neuro-biologica.  
 Folia therapeutica.  
 Folia urologica.  
 Fortschritte auf dem gebiete der roentgenstrahlen.  
 Fortschritte der medicin & beifügt.  
 Frankfurter zeitschrift fuer pathologie.  
 Gazette de gynécologie.  
 Gazette des hospitaux.  
 Gazette médicale de Paris.  
 Gesellschaft deutscher naturforscher u. aerzte.  
 Ginecologia moderna.  
 Glasgow Medical Journal.  
 Guy's Hospital Gazette.  
 Guy's hospital reports.  
 Gynaekologische rundschau.  
 Handbuch d. anatomie d. menschen.  
 Handbuch d. inneren medicin.  
 Handbuch d. neurologie.  
 Heart.  
 Hoppe-Leyler zeitschrift f. physiologische chemie.  
 Index Medicus.  
 Institut f. experimentelle therapie.  
 L'Institut Pasteur, Annales.  
 L'Institut Pasteur, Bulletin.  
 International abstract of surgery.  
 Internationales centralblatt fuer die gesamte tuberkulose-forschung.  
 Internationales centralblatt fuer laryngologie.  
 Internationale centralblatt fuer ohrenheilkunde.  
 International clinics.  
 Internationale monatsbericht f. anatomie u. physiologie.  
 Jahrbuecher d. Hamburgischen strasskrankenanstalten.  
 Jahrbucher fuer kinderheilkunde.  
 Jahrbucher fuer psychiatrie.  
 Jahresbericht f. thierchemie.  
 Jahresbericht u. d. ergebnisse der immunitätsforschung.  
 Jahresbericht u. d. fortschritte d. hygiene.  
 Jahresbericht u. d. fortschritte d. geburtshuelfe.  
 Jahresbericht u. d. fortschritte d. naehrungsmikroorg.  
 Jahresbericht u. d. fortschritte d. pathol. organismen.  
 Jahresbericht u. d. fortschritte d. physiologie.  
 Jahresbericht u. d. leist. u. fortsch. d. neurologie.  
 Jahresberichte u. d. fortschritte d. anat. u. entwickl.  
 Jahresbericht ueber die leistungen u. fortschritte in der gesamten medicin.  
 Janus.  
 Johns Hopkins hospital reports.  
 Journal de l'anatomie et de physiologie.  
 Journal de médecine de Bordeaux.  
 Journal de physiologie et de pathologie générale.  
 Journal des sciences médicales de Lille.  
 Journal d'urologie (Cont. of Annales d. maladies d. organes gen-ur.)  
 Journal fuer psychologie und neurologie.  
 Journal of anatomy and physiology.  
 Journal of Bacteriology.  
 Journal of Biological Chemistry.  
 Journal of Cancer Research.  
 Journal of Comparative Neurology.  
 Journal of Cutaneous and Genito-urinary Diseases.  
 Journal of Experimental Medicine.  
 Journal of Hygiene.  
 Journal of Immunology.  
 Journal of Inebriety.  
 Journal of Infectious Diseases.  
 Journal of Laboratory and Clinical Medicine.  
 Journal of Laryngology.  
 Journal of Medical Research.  
 Journal of Nervous and Mental Diseases.  
 Journal of Obstetrics and Gynecology.  
 Journal of Parasitology.  
 Journal of Pathology and Bacteriology.  
 Journal of Pharmacology and Experimental Therapeutics.  
 Journal of Physiology.  
 Journal of State Medicine.  
 Journal of Tropical Medicine.  
 Jurist. Psychologis. grenzfragen.  
 Klinisches jahrbuch.  
 Lancet.  
 Laryngoscope.  
 Le Nomtisslon.  
 Lepra.  
 Lyon médical.  
 Man.  
 Medical Annual.  
 Medical annual and practitioner's index.  
 Medical Chronicle.  
 Medical library association.  
 Medical Record.  
 Medical society of London. Transactions.  
 Medizinische blaeter.  
 Milchwirtschaftliches zentralblatt.  
 Mittheilungen aus den grenzgebieten der medicin u. chirurgie.  
 Monatshefte fuer praktische dermatologie.  
 Monatsschrift fuer geburtshuelfe u. gynackologie.  
 Monatsschrift fuer kinderheilkunde. Original and Referat.  
 Monatsschrift fuer ohrenheilkunde.  
 Monatsschrift fuer psychiatrie.  
 Monographien aus dem gesamtgebiete d. neurologie.  
 Montpellier medical.  
 Muenchener med. abhandlungen.  
 Muenchener medicinischer wochenschrift.  
 Munich K. psychiatrische jahresbericht.  
 Neue deutsche chirurgie.  
 Neurologisches centralblatt.  
 New England Medical Monthly.  
 New York Medical Journal.  
 Obstetrical Society of London. Transactions.  
 Office international d'hygiene publique.  
 Ophthalmic Record.  
 Ophthalmology.  
 Ophthalmic year book.  
 Ophthalmological society of the United Kingdom.  
 Parasitology.  
 Pathologische institut zu Leipzig. Arbeiten.  
 Pathologische anatomische institut zu Tuebingen.  
 Pædiatria.  
 Pediatrics.  
 Pester med-chirurgische presse.  
 Il Policlinico.  
 Practitioner.  
 Prager medicinische wochenschrift.  
 Presse médicale, Paris.  
 Progrès medical.  
 Province médicale.  
 Physikalisch-med. gesellschaft in Wuerzburg. Verhandl.  
 Progressive medicine.  
 Quarterly Journal of Experimental Psychology.  
 Quarterly Journal of Medicine.  
 Review of Neurology and Psychiatry.  
 Revue de chirurgie.  
 Revue de gynécologie et de chirurgie.  
 Revue de hygiene et police sanitaire.  
 Revue de la tuberculose.  
 Revue de médecine.  
 Revue général d'ophtalmologie.  
 Revue internationale de la tuberculose.  
 Revue medicale de l'est.  
 Revue medicale de la suisse romande.  
 Revue neurologique.  
 Revue pratique d'obstetrique et de pediatrie.  
 Riforma medica.  
 Royal London ophthalmic hospital reports.  
 Royal Society of Medicine, proceedings.  
 St. Petersburg medicinische wochenschrift.  
 St. Thomas hospital reports.  
 Sammlung chemischer und chemisch-technischer vortraege.  
 Sammlung klinische vortraege.  
 Sammlung klin. abhandlungen u. pathol. u. therapie d. stoffwechsel.  
 Schmidt's jahrbuecher.  
 Semaine gynécologie.  
 Semaine médicale.  
 Scandinavisches archiv fuer physiologie.  
 Société anatomique de Paris, Bulletin and memoris.  
 Société d'anthropologie de Paris.  
 Société medicale des hopitame. Bulletin.  
 Société d'chirurgie de Paris.  
 Société d'obstétrique et de gynécologie de Paris.  
 Société de pathologie exotique.  
 Society for Experimental Biology.  
 Surgery, Gynecology & Obstetrics.  
 Therapeutic gazette.  
 Therapeutische monatshefte.  
 Therapie der gegenwart.  
 Thompson Yates laboratory. Reports.  
 Tropical Diseases Bulletin.  
 Tropical Veterinary Bulletin.  
 Tuebingen Univ. Pathol. anat. institut. Arbeiten.  
 Vierteljahrsschrift f. gerichtliche medicin.



Wiener klinischer runderbau.  
 Wiener medizinische wochenschrift.  
 Wiener klinische wochenschrift.  
 Würzburger abhandlungen a. d. gesamtgebiete d. prakt. med.  
 Zeitschrift fuer aerztliche fortbildung.  
 Zeitschrift fuer allgemeine physiologie.  
 Zeitschrift fuer augenheilkunde.  
 Zeitschrift fuer biologie.  
 Zeitschrift fuer biologische technik und methodik.  
 Zeitschrift fuer chemotherapie, Originale.  
 Zeitschrift fuer chemotherapie, Referate.  
 Zeitschrift f. experim. pathologie.  
 Zeitschrift f. geburtsheilfe u. gynäkologie.  
 Zeitschrift fuer d. ges. neurologie n. psychiatrie, Originale.  
 Zeitschrift fuer d. ges. experimentelle mediz. n.  
 Zeitschrift fuer d. ges. neurologie u. psychiatrie, Referate.  
 Zeitschrift fuer gleitscherkunde.  
 Zeitschrift fuer hygiene.  
 Zeitschrift fuer immunitaets-forschung u. experimentelle therapie, Originale, Abt. I.  
 Zeitschrift fuer immunitaets-forschung u. experimentelle therapie Referate, Abt. II.  
 Zeitschrift fuer infektions-krankheiten u. hygiene d. haustiere.  
 Zeitschrift fuer kinderheilkunde, Originale.  
 Zeitschrift fuer kinderheilkunde, Referate.  
 Zeitschrift fuer klinische mediz. n.  
 Zeitschrift f. kerbsforschung.  
 Zeitschrift fuer morphologie und anatomie.  
 Zeitschrift fuer ohrheilkunde.  
 Zeitschrift fuer physikalische u. diatetische therapie.  
 Zeitschrift f. soziale mediz. n.  
 Zeitschrift fuer tuberkulose und heilstaetenwesen.  
 Zeitschrift fuer urologische chirurgie.  
 Zeitschrift fuer urologie.  
 Zeitschrift fuer wissenschaftlich mikroskopie.  
 Zentralblatt fuer biochemie und biophysik.  
 Zentralblatt fuer chirurgie.  
 Zentralblatt fuer experimentellen mediz. n.  
 Zentralblatt fuer die gesamte gynäkologie.  
 Zentralblatt fuer die gesamte innere mediz. n.  
 Zentralblatt fuer gynäkologie.  
 Zentralblatt fuer herz-u. gefaesskrankheiten.  
 Zentralblatt fuer innere mediz. n.  
 Zentralblatt fuer normal anatomie.  
 Zentralblatt fuer physiologie.  
 Zuerich Univ. Hirnanatomisches institut. Arbeiten.

## MITRAL STENOSIS, AORTIC STENOSIS, AORTITIS, ANGINA PECTORIS AND AORTIC ANEURISM.

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In the study of heart disease as a whole, the attention of the medical profession for a number of years has been directed to the study of the arrhythmias in particular. This was necessary, for this field was entirely unexplored until Dr. Jas. Mackenzie began studying the venous pulse along with the arterial pulse and laid the foundation for the splendid work along this line by the electro-cardiograph. A number of heart cases present no symptoms along this line, and can be thoroughly studied by the older methods of physical examination, supplemented by the clinical examination with the X-ray. It is our purpose today to consider a number of cases and discuss a few outstanding points, largely along the older lines.

### MITRAL STENOSIS.

The first case is that of Miss W., referred for examination by Dr. W. R. Chittick. She

is 28 years of age, a stenographer by occupation. When first seen by him, she was suffering from dyspnea on slight exertion and orthopnea. Her father died at 41 years of age. Following an attack of measles at this age, he had pneumonia, infectious arthritis and a cardiac complication. The mother has also a history of infectious arthritis, but is fairly well and 49 years old. The patient's history brings out the fact of a mild infectious arthritis at 12 years of age. Four years ago, she began having spells of syncope, usually having an attack twice a month. The outstanding features of her physical examination reveal a palpable presystolic thrill in the second and third left intercostal spaces. There is a presystolic roll noted on auscultation, also a clear mid diastolic murmur audible at the left base. The systolic blood pressure is 112 mm., the diastolic 70 mm. The heart borders as determined by percussion, are, right 2.5 c.m. in the fourth space, the left 5 c.m. second space, 7.5 c.m. in the third space, and 10 c.m. the 4th space. The lungs are clear, the liver not enlarged, and there is no edema.

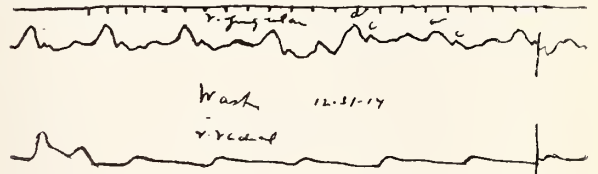


Figure 1, illustrating Case No. 1 - Note large a wave in jugular pulse.

The X-ray reveals the enlargement of the left auricle. The venous pulse tracing shows a regular pulse with a large a wave due to the forcible contraction of the auricle.

The diagnosis of mitral stenosis in her case is easily made.

CASE 2. Miss M. L. L., a member of a wealthy family, was referred by Dr. J. D. Matthews, and first seen June 8th, 1915. The age is 32 years. The mother is well at 52 years, her father died at 56 years of diabetes mellitus. As a child she had measles and diphtheria. From 11 years of age until five years ago, when her tonsils were removed, she had tonsillitis every year. The adenoids were removed seven years ago. She had never had a frank case of arthritis, but has even recently had slight pains in shoulders and back. The complaint is of the violent beating of the heart, especially at night, while during the day attacks of tachycardia are noted. Physical examination of the heart shows right border of

3 c.m. in the fourth space, the left border being 2 cm., 9 cm., 10 cm., 10 cm. in the second, third, fourth and fifth spaces. There is a presystolic thrill on palpation, on auscultation a presystolic roll and also a diastolic murmur, heard best at left base. The second sound is reduplicated. The systolic blood pressure is 112 mm., the diastolic 72 mm. The lungs are clear. There is slight thyroid enlargement.

The pulse tracings show the prominent *a* wave in the jugular, occasional premature auricular beats, while one tracing shows a short run of tachycardia. The pulse rate runs from 58 to 74.

CASE 3. Miss S. H., age 33 years, single, a book-keeper, first seen March 17, 1916, represents a common condition observed later on in the history of such cases. The father died at 49 years, following an operation for appendicitis. The mother is living at 60 years, but is a constant sufferer from "rheumatism." One older sister has a heart ailment, while a younger sister is delicate. A brother is in good health.

*Past History.*—When 4 years old, she had "rheumatism," the lower extremities being affected. When 12 years old she was again ill with the same complaint, remaining five weeks in a Chicago Hospital for treatment.

*Present Condition.*—She is a well nourished female, well proportioned but rather undersized. Nose, throat and mouth are negative. She gives no history of tonsillitis. The systolic blood pressure is 110, the diastolic is not obtainable.

The heart's borders by percussion are right 2.7 cm., 2.5 cm., 2.5 cm., 2.5 cm., left 2.7 cm., 4.8 cm., 8 cm., 12 cm., from the mid-sternal line, in the second, third, fourth and fifth spaces. The apex is in the sixth space, 12.5 cm. from the m.s.l. There is a diastolic murmur heard best at the left base. The pulse is absolutely irregular, 73 is the rate at the radial, and 82 by auscultation. The lungs show fine crepitant rales at both bases. The liver extends from the sixth rib to one finger below the costal margin.

The X-ray shows a decompensated heart, in which there is dilatation of the right ventricle. The pulse tracings show the absolute irregularity. The venous tracings are characteristic of auricular fibrillation.

CASE 4. On December 1st, 1915, the patient, Mrs. A. B., was seen in consultation, a hemorrhoidectomy having been performed by Dr. J. A. McMillan on November 29th, ether being administered as a general anesthetic.

The patient was 51 years of age. The father

died at 58 years of age with a complication of diseases involving the liver and stomach, the mother died at 47 years of age probably as

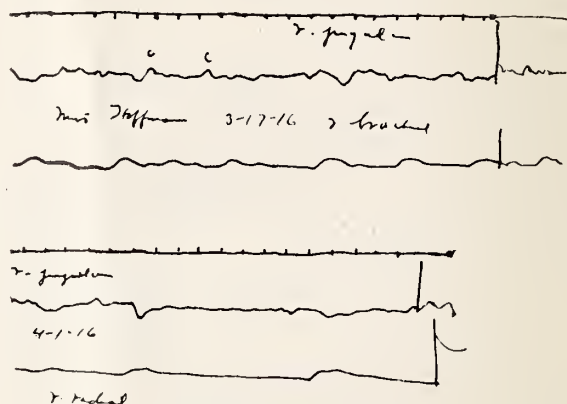


Figure 2: illustrating Case 3. Note absolutely irregular pulse, also *a* wave in jugular

the result of nephritis, as she died in a convulsion, although it was attributed to the menopause.

As a child, the patient had frequent attacks of tonsillitis, but had presented no signs of serious illness until two weeks before the operation, although there was a tendency to breathlessness on exertion which, however, did not deter her from taking part in a dancing party four weeks before her death on December 11, 1915.

Before the operation the temperature was 100.2° F., pulse 112 with no signs of irregularity, respiration 24. The next day her temperature was 99.2° F., pulse and respiration as before.

When first seen by me, the temperature was 99.8° F., respiration 28, the pulse by radial palpation 114 and absolutely irregular, while by auscultation the ventricular rate was found to be 149.

The percussion findings were, left border 2 cm. from the mid-sternal line in second space, 5 cm. in third space, 9.5 cm. fourth space, 13 cm. in fifth space, 13 cm. in sixth space, the apex being in the sixth space, 12.5 cm. from the mid-sternal line. No murmur could be detected but the diagnosis on account of percussion findings was mitral stenosis with auricular fibrillation.

There was also a slight area of dullness containing about two square inches in the lower lobe of right lung, accompanied by increased vocal resonance, and bronchial breathing. This was considered to be due to pulmonary embolism and infarction.

December 3, 1915, although she appeared all right a short time before when being given her



bath by the nurse, it was noticed that her mouth was drawn to the left side, and that enunciation was very imperfect, although her mind seemed to be as clear as usual, and there was also some paresis of the right arm. This was diagnosed as due to cerebral embolism, the systolic blood pressure being 112 mm., the diastolic 82 mm., the heart rate 160 by auscultation, the irregularity persisting. On percussion the right border was 1.5 cm., the left border 17 cm.

December 4th there was noted no palpable pulse in the left radial artery, due to embolism in this artery.

December 7, swelling was noted in the left side of the neck, about the ear and lower jaw, and the external jugular vein was found to be hard, and could be rolled like a pencil under the finger, and was not pulsating evidently due to thrombosis.

December 8th, the right side of the neck was found swollen, and the right external jugular vein was discovered thrombosed. Cheyne-Stokes respiration was now present and persisted to the time of her death in varying degree.

The temperature up to Dec. 9, 1915, remained normal or subnormal, when it went up at midnight to 100.6° F., at 4 a. m. of the 10th, it was 103.4° F.; at 9 a. m., it was 102.6° F., and remained elevated until her death on December 11, 1915. December 10, the systolic blood pressure was 92 mm., diastolic 60, the right border was 2.5 cm., the left border 14.5 cm., and the heart rate by the apex beat was 156.

Blood culture was done with negative result.

An autopsy was performed the evening of Dec. 11th, 1915, by Dr. Plinn F. Morse.

The heart was found enlarged. The ear of the left auricle shows marked contraction as the result of an old organized thrombus.

The mitral valve admits only a thumb and that with difficulty. There is a fresh mitral endocarditis superimposed upon an old one.

The right ventricle was immensely dilated. The tricuspid valve admits 3 to 5 fingers with ease. There is an agonal thrombus adherent to the flaps of the valves.

The aorta shows marked linear sclerosis.

There is a sclerotic condition at the mouth of the right coronary artery, but the artery itself is not sclerotic. There is a small sclerotic spot near the upper branch of the left coronary.

There is infarction in the lower lobe of the right lung, the size of a walnut, with atelectasis. There is evidence of a right-sided diaphragmatic-pleurisy. A subphrenic abscess anteriorly placed was found. Infarction is present in the

spleen and right kidney. Thrombosis is present in the left external jugular vein, the right vein not being examined.

Later microscopic examination revealed a diffuse purulent myocarditis. Miliary abscesses are seen throughout the heart muscle, some involving the auriculo-ventricular bundle. There is an acute ulcerative endocarditis superimposed upon a chronic sclerotic endocarditis.

Pulse tracings show the absolute irregularity.

#### DISCUSSION.

Mitral stenosis is much more common than is the diagnosis of the condition. In a classical case the presystolic thrill noted on palpation, and on auscultation the presystolic roll usually heard in a very small area, with the sharp first sound, make the diagnosis easy, especially when accompanied by the X-ray finding of a dilated left auricle. The blood pressure is usually low, the systolic often being near 100 mm., in some cases below it, with often a low pulse pressure as well. Arrhythmias are especially prone to develop in this condition. Premature auricular systoles singly, or in series, as a paroxysmal tachycardia, occur, and as is well known, a later finding frequently observed is auricular fibrillation. When the fibrillation appears, the presystolic thrill and murmur disappear, but the diastolic murmurs originating at this valve persist and are helpful in diagnosis. This condition is especially prone to develop in women, seven out of my last ten cases being of the female sex.

Embolism originating in vegetation on the mitral valve, or sequential to thrombosis of the left auricle are frequent, and may strike any part of the body, as evidenced, by the findings in Case 4.

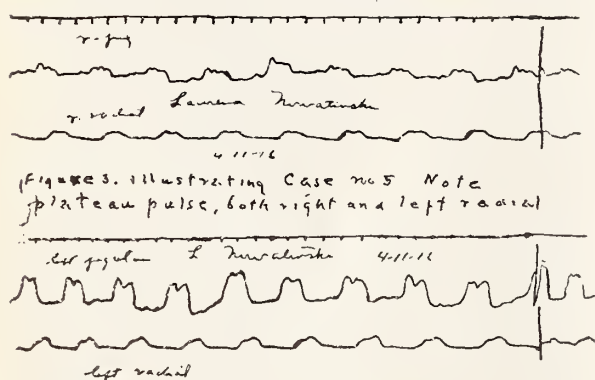
#### AORTIC STENOSIS.

Aortic stenosis is confessedly a rare disease. Men of wide experience have told me that they have never seen a clear case. During the first six months of 1916, three cases in which this diagnosis was considered certain, were seen. Pulse tracings from the three we show and X-ray from one. Blood Wassermann's in the two men were negative and on one woman was not done, but syphilis was an improbable factor.

CASE 5. The most interesting is of L. N., age 40 years, a laborer, of Polish descent, only seven years in this country, who came into St. Mary's Out-patient Department, and was then transferred to the medical ward, where I had the opportunity of studying the case. His complaint was shortness of breath on exertion.

Twenty years ago he had "rheumatism" for two weeks, in feet, hands and elbows. He has always been well, never smokes nor drinks.

Physical examination shows a well developed individual, of cyanotic appearance. There is a cataract in the right eye. Nose and ears negative. Throat congested. Teeth fair, with some pyorrhea. The chest is broad, and deep, expansion equal. The heart borders are right 3.5 cm., 2.8 cm., 2.7 cm., 3 cm., and left 2.5 cm., 5.5 cm., 8.8 cm., 13.5 cm., 15 cm. in second, third, fourth, fifth and sixth spaces respectively. There is a harsh thrill in the aortic area, systolic in time. On auscultation, a systolic murmur is noted in the aortic area, and a fine blowing diastolic murmur as well. At the apex a clear systolic murmur is also heard.  $P^2$  is much accentuated. Liver dullness extends from



the fifth rib to the costal margin. The lungs are clear, abdomen negative. The fingers are clubbed. There is no tenderness or irregularity of the tibia and there are no enlarged glands. The systolic blood pressure is 118 mm., the diastolic 60 mm. The diagnosis is aortic stenosis with consequent regurgitation, and a relative mitral insufficiency. The X-ray shows enlargement of the first portion of the aorta, and the pulse tracings show the typical plateau pulse. The urinary findings were negative. Premature beats were present on the occasion of some examinations, especially on sitting up.

CASE 6. Mr. W. C. B., referred by Dr. Henry Harrison, shows an identical picture, but with signs of marked decompensation, as shown by edema, shortness of breath on exertion, and orthopnea.

CASE 7. Mrs. F. L., referred by Dr. T. A. McGraw, Jr., for examination, yielded a similar picture and shows also premature beats.

#### DISCUSSION AORTIC STENOSIS.

Aortic stenosis may be diagnosed when we have a palpable systolic thrill in the aortic area, a rough systolic murmur on auscultation in this area accompanied by a diastolic murmur, pro-

vided we have the characteristic plateau pulse in both right and left radials. As stated by R. C. Cabot, this lesion is usually of streptococcus origin. Treatment consists in general care and the administration of supporting doses of digitalis.

#### SPECIFIC AORTITIS.

CASE 8. Mr. F. C. came for examination May 2nd, 1916, his complaint being a persistent pain in the chest which had not been relieved, although under treatment by several physicians since January, 1916. This pain is sometimes a girdle pain at the level of the epigastrium but the severest pain and most persistent is in the left chest, at times taking his breath away and making him unable to talk. This is sometimes accompanied by numbness in the left arm. This condition at times is so painful as to render the thought of suicide pleasant. Rest does not alleviate the pain, and when he lies on his back everything seems to squeeze together in his chest and shut off the breath. The family history is negative, and as a child except that he has had tonsillar abscesses three times, with some arthritic manifestations. His venereal history began at 15 years with an attack of gonorrhea, a second attack occurring at 27 years of age, six years ago. As a member of the U. S. Navy, he exposed himself freely while in Japan and the Philippines to venereal infection. The right borders are 3 cm., 3 cm., 4 cm. in the second, third and fourth spaces, and the left borders, 3.5 cm., 9 cm., 15.5 cm., 13 cm. in the second, third, fourth and fifth spaces, respectively. There are no cardiac murmurs, but the first sound in the aortic area is impure.  $A^2$  and  $P^2$  are both accentuated. The systolic blood pressure is 128 mm., diastolic 80 mm. The pulse is 78 per minute and regular. The blood examination yielded a XXXX Wassermann. The diagnosis confirmed by the X-ray, which shows aortic enlargement, is specific aortitis. The condition has been ameliorated by mercury hypodermically, and the iodides internally, but with remissions in the treatment the conditions recurs in the severe form. Opiates have no effect upon the pain. The pulse tracings show a perfectly regular pulse.

#### DISCUSSION OF SPECIFIC AORTITIS.

Luetic aortitis is far more common than generally supposed, and should be looked for in all active syphilitic cases, as it is not necessarily a late complication. When on percussion, the area of great vessel dullness in the second space exceeds 6 cm., the cause of the enlargement should be determined. If lues can be deter-



mined, treatment along this line is indicated. Salvarsan intravenously in small doses, com-

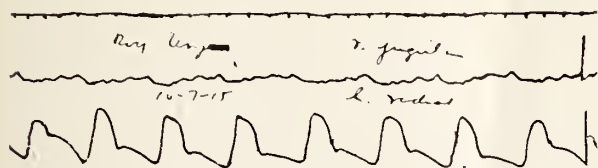


Figure 4, illustrating Case No. 10. Note great difference between right and left radials

bined with mercury and the iodides, should be administered. It is surprising how painful are the symptoms developed by this condition.

#### ANGINA PECTORIS.

CASE 9. I. M., referred by Dr. G. L. Connor, was first seen October 2nd, 1914, suffering from attacks of angina pectoris, which began in 1897. At the time of his first visit he was 56 years old. His family history is negative. He has never suffered any serious illness, but as a saloonkeeper, was for twenty years a heavy drinker of whiskey, and used tobacco to excess. He also admits exposure to venereal infection, but no symptoms of such trouble were ever noted, and the blood Wassermann is negative. His first attack of pain came on while skipping rope. The pain has its seat in the chest and radiates down the left arm, in very severe attacks, going down the right arm as well. He feels as if there is a weight in the chest, and as well a choking sensation is noted. At first the attacks came on only after exertion, but now he has them even while lying in bed. His heart examination, gives in the second space, right border, 3 cm., left border 4 cm. In the fifth space the right border is 4.5 cm., the left border 11.5 cm. There is a systolic murmur audible in the aortic area, and also in the great vessels. The systolic blood pressure varies, occasionally going up to 160 mm. but usually runs about 135 or 140 mm., with a diastolic of 80 to 90 mm. The pulse rate is usually from 60 to 65, the pulse being perfectly regular. Antisyphilitic treatment was not well tolerated, and his treatment has been largely symptomatic. Sodium nitrite in one-half grain doses four times a day has been given, also small doses of tincture digitalis combined with fluid extract of hyoscyamus, on account of decompensation. During seven months of last winter he was confined to his home and most of the time to

his room, on account of heart weakness, but with the advent of warmer weather, he again became able to walk a number of blocks on the level, but walking up more than one flight of stairs causes severe symptoms to present themselves.

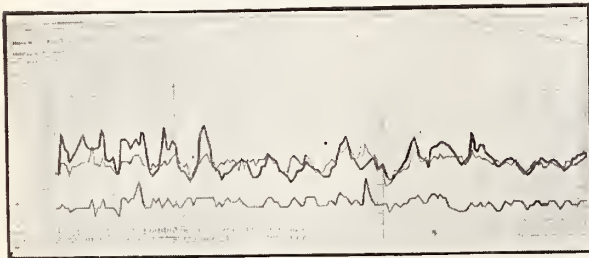
#### DISCUSSION OF ANGINA PECTORIS.

Angina pectoris is a condition often described, and seen fairly frequently, but the exact etiology and pathology are a matter of controversy. While the case related may be of luetic origin, there is no proof of the same clinically, and in another case, recently seen, where the picture was characteristic, the blood Wassermann was again negative, and there was no reason to suspect it. While a distinguished pathologist has declared he finds spirochetes in all cases, he has autopsied, we must yet consider the case not proven. We are inclined to hold with Allbut that the condition is due to an aortitis of the first portion of the aorta, whether due to lues, streptococcus or other infection, and not due to hemorrhagic infarcts in the heart muscle occurring at the time of the onset of the pain. The treatment consists in the use of the nitrites chiefly. Hyoscyamus and theobromine and sodium salicylate help to allay the pain which, when acute, requires morphine hypodermically. When syphilis can be proved, anti-syphilitic treatment should be used in conjunction with the other measures.

#### AORTIC ANEURYSM.

CASE 10. R. A. came first for examination Oct. 7th, 1915, referred by Dr. A. L. McGough. He is 30 years of age, single, a traveling salesman. The family history is negative. He had the usual diseases of childhood, but has not had tonsillitis or arthritis. Five years ago he had a mild attack of typhoid fever. In 1913, he had an attack of gonorrhea lasting two months, which is all he has of venereal history in a clear way. Before 25 years of age, he was seldom exposed, but since then, he has accepted many opportunities for illicit intercourse. In June, 1915, while singing the Toreador song from Carmen, something seemed to snap in his chest, which was followed by pain in the upper chest. He went right to bed, and thinks he became unconscious. After a time he became conscious of a severe pain, and a doctor, who was called, gave an anodyne. A fluoroscopic examination a few days later revealed an aortic aneurism, for which his physician there—he was in Kansas City at this time—gave him doses of salvarsan intravenously, ordered him to bed, and put him on a course of iodides until in the

latter part of July, when the thyroid became enlarged, and it was discontinued. A pulsating lump was noted in the second right intercostal space. Examination shows a well developed athletic type of man. The pulse rate is 83 and regular. At examinations later, he showed premature beats which caused him considerable annoyance. The right pulse is much smaller than the left. The systolic blood pressure was, right arm 160, diastolic 140, while the left arm yielded a systolic of 165, diastolic 115. The heart borders were, right 3.5 cm., 4 cm., 2.5 cm., 3 cm. in the first, second, third and fourth spaces, the left borders, 4 cm., 3.5 cm., 4.5 cm., 9 cm., 9.5 cm., in the first, second, third, fourth and fifth spaces, respectively. A thrill is noted in the second right intercostal space and a slight visible pulsation is present. The first sound is clear, the aortic sound is clear but is accompanied by a diastolic swish. Lately a systolic murmur is noted in the aortic area, accompanying the diastolic murmur, and on examination August 4th, 1916, the systolic murmur alone was observed. The radials are markedly sclerosed, especially the right. The blood Wassermann was XXX. Under hyodermic medication with mercury and the administration of small doses of the iodides he has improved somewhat. The pulsation is barely observable. The systolic blood pressure, right arm, is 120, diastolic 90, left arm sep. 122, dep. 80, left arm on August the 4th, and to



percussion, the aortic area is smaller in the second space. The X-ray shows the aortic aneurism, while the pulse tracings show the difference in the character of the right and left radial pulses.

#### DISCUSSION OF AORTIC ANEURISM.

Aortic aneurism should be suspected in chest cases, where either persistent pain or cough without a definite cause, is present, and they should be subjected to the X-ray, especially if other physical signs are negative. Through modern intensive syphilitic treatment, there is reason to believe that the future of such cases is not so black as ordinarily pictured. In classical cases with a tumor with expansile pulsation

synchronous with the cardiac systole, with diastolic shock, with unequal pulses, with blood pressure findings markedly variant on the two sides, with tracheal tug, with modification of the voice and possibly unequal pupils, the diagnosis can be readily made. At this time, however, medical measures will be of little avail. The point to be emphasized in this connection, is early diagnosis with the assistance of the X-ray, and intensive treatment with anti-syphilitic medication, salvarsan in small doses in conjunction with mercury by hypodermic or inunction methods, and the iodides.

NOTE: The X-ray work for these cases was done by Dr. George C. Chene, and the photographic work by W. D. Gilmore, of Detroit.

505 David Whitney Building.

#### POLIOMYELITIS.\*

I. L. POLOZKER, M.D.  
DETROIT, MICH.

Infantile paralysis is now classed as a communicable disease; we do not use the terms contagious, or infectious so much, in fact, we are trying to get away from them entirely. It seems to me, and it always has, that these two terms have been, and are now used very indiscriminately, their definitions vary very widely both by the laity and by our profession. By contagious disease, I understand such a disease as can be gotten directly by contact with patient, not having a broken surface for the absorption of the infection, but by coming in contact with the patient, or his infective material, our organism being in a receptive mood, we get the disease. By infectious disease, I understand, that we must get the causative germ to be absorbed into our blood, and so contract the disease, by some mode of absorption, either through an open wound, or by the glandular system, directly into the blood stream. A contagious disease may be infectious, but an infectious disease need not necessarily be contagious; for instance, we know that malaria, syphilis, or septicemia, are infectious, but not contagious, one can not contract either of these diseases, by mere bodily contact, without having an open avenue for absorption, as one can scarlet fever, small-pox etc. As long as these terms intermingle very much, and are very loosely used, we think the term communicable the best to use at present.

It seems to me the more we know about the

\*Read before Lapeer County Medical Society by invitation.



causative factor of these diseases, the more likely we are to place them into the infectious group, and when we do not know the causative factor, or when the germ is still in dispute, we class them as contagious diseases. The same may be said about infantile paralysis. But as soon as we definitely accept the germ as a causative factor of that disease, we include them in the group of the infectious diseases, like yellow fever and malaria.

Poliomyelitis has been chosen as the subject of this paper, because of its present prevalence, and consequent interest. The epidemic, now raging in the East will undoubtedly clear up a good many points as to etiology, diagnosis, and we hope, as to specific treatment. It has already made the diagnosis easier, and the Rockefeller Institute claims to have definitely discovered the germ causing the disease. This epidemic in New York is no more alarming, than that of 1907, but the New York Board of Health is responsible for its popularity. They have decided this time on a publicity campaign, and have taken every step to inform the laity all about its communicability, so much so, that the newspapers of the country have taken it up to such an alarming extent, that a fear has been put in every mother's heart; I, myself, have had numerous calls, where the first question put up to me was: "Has my child infantile paralysis?" However, if this publicity is going to result in giving us a better understanding of the disease, we must welcome it.

Poliomyelitis is an acute infectious communicable disease, caused by the invasion of a micro-organism of the central nervous system. It has been reported as an epidemic disease as early as 1841, by Colmer of this country. Then again in the Vermont epidemic of 1894. The clinical division of this disease was given first by Medin, in 1884, from an epidemic in Sweden. The micro-organism, according to Flexner is very minute, but can be seen through a high power microscope, and can be grown on artificial culture. It is usually found in the mucous membrane of the nose and throat also in the gastro-intestinal tract, and always in the membranes of the spinal cord and brain. It has been conclusively proven that it may exist in the naso-pharyngeal mucous membrane of healthy persons. Individuals have been found in this epidemic without any signs of any illness, who have carried this disease to others, as in diphtheria and typhoid. It has also been proven that the micro-organism may persist in some cases, after recovery, and in

abortive cases, for months afterwards. The Rockefeller Institute has successfully inoculated monkeys with the virus from the washed mucous membrane from the nose and throat of persons as late as six months after recovery. The incubation period of this disease, which is the time that elapses between the entrance of the disease causing microbe into the body, and the onset of the symptoms is usually from two days to two weeks; in the present epidemic, the period of incubation did not exceed eight days. The clinical types of this disease vary with clinician, pathologist, and even the orthopedic surgeon has new divisions for this disease, but from our standpoint, we will take the clinician's division. Dr. Koplik, in a recent communication, read at the meeting on infantile paralysis, held at New York Academy of Medicine last July, divides the clinical manifestations of this disease as follows: First, abortive; second, bulbar-spinal; third, cerebral or meningeal; fourth, bulbo-pontine. Others have still more divisions. I think the fewer divisions we have, the easier it is to comprehend the disease and make a diagnosis; the greater the number of divisions, the greater the confusion. Let us see; we certainly have abortive cases, and this present epidemic proves more than ever that we may have cases exceedingly mild and without any paralysis; from the existing symptoms alone, were it not that they appeared during an epidemic, and that laboratory methods have been able to isolate from them the causative germ, and successfully inoculate, we would never have suspected the disease.

Usually a child is taken down with vomiting for a few days, without diarrhoea, irritable, restless, cries a great deal, if old enough, will complain of headache, pain in the limbs, malaise, refuses to play, slight fever, from 100 to 101 F., exaggerated reflexes, but no paralysis; this is the picture of an abortive case. Such cases as this are occurring repeatedly in New York, to be followed quickly in the same family by severe paralytic cases.

The symptomatology of this disease depends really, one may say, on the pathology. To the extent to which the central nervous system is involved by the infection, to such extent do the symptoms develop. If the invasion by the infective micro-organism does not reach the meninges of the spinal cord and brain, one does not have the meningeal or bulbar type, if the infection does not penetrate and destroy the nervous tissue, one does not have any paralysis. According to this, it seems to me, a simple division would be, first, abortive; sec-

ond, paralytic, which would include the bulbar form; then third, cerebral or meningeal, or cerebro-spinal. Such a classification would be easier to remember and easier to teach. Koplik's first three divisions are about the same, but he adds to them the so-called bulbo-pontine type, which, he says, has been reported in the Swedish and the present New York epidemic, as a distinct type of polio-myelitis; it is a form in which, after the prodromal attack, with fever, vomiting, increased reflexes, there follows a paralysis of the side of the face, usually the right side, followed by paralysis of the upper or lower extremities, or both. The paralysis of the face may come on in two days, or as late as nine days, or later. But I think the second or paralytic form covers this. If we were to include every form of paralysis that may follow this disease, in a separate classification, it is easily seen that we would have many forms of this disease. As has been said, we have the abortive type, so prevalent in this epidemic, presenting a picture with a group of symptoms, which in the absence of an epidemic would scarcely be suspected, but during an epidemic, the following should put us on guard: A child taken sick with headache, vomiting, increased or diminished reflexes, muscular weakness, pain in the back of the neck and some fever. These abortive cases almost invariably recover. The paralytic type may have the same prodromal symptoms as above, to be followed in a day or so by paralysis of one or more extremities.

Usually there will be found a history of a child's indisposition a few days preceding the paralysis, providing one knows how to obtain the same of the mother, but often I have been called in consultation when both mother and attending physician claim that the child has been perfectly well the day before, but does not seem to walk, or use one leg or arm. Often the attending physician is unjustly blamed for the paralysis, when you have told the parents what the trouble is; this is unfair, as no diagnosis can be made in the absence of an epidemic. We are not always so fortunate in the paralytic cases as to have only one or more extremities involved. The paralysis may extend to the muscles of the thorax, abdomen or back; it may also involve the respiratory muscles and be immediately fatal. As a rule these cases are purely spinal, the paralysis does not extend from the extremities, and are not fatal, it seldom spreads to the medulla after the tenth day. During the present epidemic in New York, there have been many cases of infantile

paralysis, in which the first symptom was a laryngeal paralysis in which the attending physician suspected diphtheria, calling in an expert to intubate the case, which has afterwards been proven to be poliomyelitis. Since starting this paper, I am convinced that I have seen just such a case. On the 22nd of August, I was called to see C. G., aged six years, to intubate for laryngeal diphtheria, a physician and consultant who were present, both made that diagnosis. The little fellow lay there experiencing difficulty in breathing and swallowing, his temperature was normal, examination of his throat revealed, with the exception of some mucous at the back of the pharynx, no visible membrane. A tube inserted in the larynx, gave him no relief; on further examination, I found he had no use of the left lower limb, considerable rigidity at the back of the neck. The mother and attending physician said that the child had been taken sick three days before with persistent vomiting, no diarrhea, and a temperature of 100 to 102 F.; very irritable, complained of pain in the back of the neck, and of headache; a culture made from the throat proved negative as to Klebs-Loeffler infection, the boy died soon after I left the house, with all the symptoms of laryngeal paralysis. Not being able to prove it by laboratory methods, but having in mind the similarity of the cases appearing in the east, I can but feel that it was a case of poliomyelitis. The cerebral or meningeal form, is due to the real involvement of the meninges, brain and spinal cord, and so must be diagnosed from meningitis, usually, when obtainable, we get the prodromal symptoms of fever, vomiting, headache, increased rigidity of the neck, diminished knee reflexes, Brudzinski's Macewen's, and Kernig's present, great hyperaesthesia, some pain, then stupor and unconsciousness develop, difficult breathing and death; or we may have at once the symptoms of meningitis with paralysis of upper, or lower, or both extremities. Sometimes the progress may be very slow with exacerbations, like a tubercular meningitis. To diagnose these cases is very difficult, we must always obtain aid of the laboratory, and early make an examination of the blood and spinal fluid. The study of the blood made by Peabody, Draper and Dochez of the Rockefeller Institute shows in all cases an increased leucocytosis and a polymorphonuclosis; but that in the absence of an epidemic, will not help us much, as we have these findings in many other conditions. The spinal fluid gives us more definite findings for early diagnosis, first, an



increased amount of spinal fluid; increased albumin and globulin, and also cellular increase; a cloudy fluid early, must be differentiated from meningitis, but the percentage of polymorphonuclear in a cloudy fluid of poliomyelitis is usually low, you will also find the causative organism in meningitis. To recapitulate then, the spinal fluid of poliomyelitis is usually increased in amount and clear, with a moderate increase of albumin and globulin, a polymorphonuclosis, maybe as high as 90 per cent.

What is done in the present epidemic, where every facility is at hand, is what is called a neutralization test for diagnostic purposes; the serum of the suspected case in the stage of recovery, is mixed with a known fatal dose of an active virus, this is incubated, and later injected intracellularly into monkeys, if the disease does not develop, it means that the virus has been neutralized. Of course if we could have the use of monkeys for inoculative purposes, they could be inoculated with mucous washings from the respiratory or alimentary tract, and obtain the disease. As practicing physicians, without these aids, we must pay more attention to the clinical side of this disease, watching and studying the symptoms peculiar to it, being, especially now, on the lookout for its first appearance.

As to the season of the year, while there may be epidemics any time of the year, they increase in frequency in the spring of the year and reach their height in July and August, declining gradually with the appearance of cold weather; this has been verified in every epidemic in every country where the disease has occurred, so that we must admit that hot weather has something to do with its frequency. While the disease may occur at any age, it is much more frequent in children under five; the majority of cases in the present epidemic are between one and two years of age. Another peculiarity of this epidemic is the fact that no case has appeared amongst the colored race. This has been Dr. L. C. Ager's experience at Kingston Avenue Hospital where they had from June 20 to July 12 320 cases of this disease.

All these cases have a different onset, but usually from the history, in all of them there is a prodromal history of from one day to one week, during which time there is vomiting, a slight increase of temperature, remittent in character, malaise, restlessness, headache, pain in the limbs and some rigidity, hyperesthesia, reflexes increased or diminished, we may also

have gastro-intestinal or respiratory symptoms predominating, when there may be symptoms of influenza, with pain in all the joints and back, and general muscular tenderness: the lymphatic glands may frequently be enlarged and palpable, showing that we have a general infectious disease to deal with, presenting a great variety of manifestations. Lumbar puncture should always be done, when an increase of albumin and globulin will be found, a lymphocytosis and a large number of polymorphonuclear cells. We must always bear in mind the abortive cases. In the paralytic cases we may have paralysis follow in day or two, maybe as late as a week. On the 27th of August, I was called in consultation to see a child, 17 months old, who had been sick five or six days, persistent vomiting, very little fever for two days, extreme restlessness, and the doctor told me on the morning of my consultation, that the child was unable to use the right arm and leg, and his diagnosis was of course, poliomyelitis. I first saw the child late that same afternoon, found her temperature normal, she was able to take her food, and she was restless and had some pain, and paralysis of the right deltoid muscle; but she kicked around the lower limbs pretty freely, there was no paralysis of the right leg. Of course I can not be convinced that the paralysis noted in the leg in the morning could have disappeared by afternoon; in my opinion even the deltoid paralysis will, in time, entirely disappear but will take some time. Paralysis has generally been more noted in the lower extremities, next in the upper, and less frequently the facial paralysis, and paralysis of the back, as to its permanency, the largest percentage is of the lower extremities, the toxin seeming to have a special action on the lumbar portion of the cord. Draper calls attention to a special pre-paralytic important sign, the anterior spinal flexion sign, it is elicited by so flexing the hips and head upon the trunk that they nearly approach each other. The meningeal type is hard to diagnose, it also has the prodromal symptoms before the meningeal symptoms. In December, 1912, I was called to see a boy 13 years old, who had been perfectly well previous to my visits; on examination, he was found to have a temperature of 102, severe muscular pain, especially in the calf of the left leg, examination was otherwise, negative. The boy ascribed the pain in the leg as due to an artificial arch in a pair of new shoes, he was a very heavy boy for his age. I was called again the same day, the parents claiming that he was worse, the temperature

was found to be slightly higher, with paralysis of the left leg; at this time I elicited a history from the boy, that he had not been well for several days, with vague pain and headache, and disinclination to be out and play. The next morning his breathing was labored, he could not swallow, meningeal symptoms set in. a consultant, who saw him at this time with me, could not offer a diagnosis or any suggestion, his temperature jumped to 106 and he died that afternoon. In talking it over later with the consultant, I suggested poliomyelitis of the meningeal form, with which he agreed, no post mortem was allowed, and the death certificate was signed as such. Since the literature of the present epidemic has appeared, I am more inclined than ever to believe that I was correct.

Why only one child in a family will contract infantile paralysis, and all the others exposed, escape, must be due to a certain immunity possessed by one and not by another, or that virus is more virulent in the one case than in the other. We have all formerly, when our knowledge was not so great, placed a child suffering with this disease in a ward full of other children with no further spread of the disease. It is a question in my mind, whether this disease is at all contagious, after the paralysis has set in.

As to the virus, we know from Flexner's teaching, that it may remain on the mucous membrane of the nose and throat of healthy persons, who have come in contact, with acute cases of infantile paralysis, and not falling ill themselves, convey the infection to others, especially children; this shows that there must be resistance, and also that it is necessary for the micro-organism to be carried to the central nervous system, where it is always found in severe cases. Hence having the virus on the mucous membrane of the nose and throat, or even intestines, if that be the avenue of entrance is not sufficient. The lymphatic system has to carry it to the central nervous system to develop the disease, and it does not always do it.

It is claimed the virus of infantile paralysis has no relation to the type of the disease developed; in all three types the virus was found in the cerebro-spinal axis, as well as the mucous membrane. The virulence of the infective micro-organism, causing this disease, is subject to great fluctuation, affecting very probably its power of communicability; this may explain why, in the past, those cases treated in the wards did not infect the other children. The same specimen of virus from human beings, very ill with this disease, may be of a low

infective power for monkeys, but may become of higher infective power, after passing from monkey to monkey, and remain so for a long while; finally it begins to lose its virulence, becoming much less potent. According to Flexner, the rise and fall of the number of cases in this epidemic, depends upon this fact; an active high-power virus has been introduced anew, produced from a latent low-power virus from a previous epidemic, which has passed through many different media. The susceptibility of individuals may vary greatly from time to time, the younger the child, the more susceptible to the disease.

No age is immune. In the past not much attention was paid to the abortive cases; it may be that when a child was sick with poliomyelitis, and while we thought that the other members of the family escaped, they might have had the disease in the abortive form. These abortive cases are a very important factor in preventing an epidemic. We know we have carriers, but we can not prove it as we can in diphtheria and typhoid, hence we can not isolate such cases, though we hope some day to be able to do so. They have proved at the Rockefeller Institute that one attack, no matter of what form, protects an individual from subsequent inoculation. The blood of persons who have recovered from this disease, destroy or neutralize the effect of the virus, and the immunity of subsequent infection, depends upon the presence in the blood, of immunity bodies which form during an attack, and which have been found years after the recovery of the patient. These immunity bodies appear in the blood, even in the mildest forms of the disease, and persist as long as twenty years after contracting the disease. This lead them to immunize monkeys by subjecting them to inoculation with doses of the virus, and the immunity was complete; the immunizing bodies appeared in the blood the same as after a real attack, but the animals did not get the disease, and so they continued to transfer this blood from immune monkeys to normal ones, rendering them also immune. In some case in these experiments the animals though being immunized, also became paralyzed, so the immunization of human beings is still dangerous of the possibility of giving them the disease while being immunized.

As to the treatment; since we have as yet no specific serum, nor any other treatment that promises results, we must, for that reason, give much attention to the prophylaxis, and avoid an epidemic, if possible. Let us see what can be done with our present knowledge on the



subject. We do know that the virus gains entrance through the nose, bucal mucous membrane, and possibly, gastro-intestinal tract, usually during the hot weather, and affects, preferably, young children. It has as a prodromal, catarrhal, or influenzal symptoms, in many cases, gastro-intestinal symptoms; an incubation period from two to eight days. After the onset we have the paralytic stage, the stage of improvement, and the final stage of permanent paralysis. We have abortive cases, difficult to diagnose, which are just as infective as the others. We know that the greatest period of communicability, is during the acute stage; the virus does not, as a rule, persist in the body longer than four or five weeks; this has been proven experimentally in animals. We also know that we may have chronic carriers. First we must be on the lookout for such cases, by keeping the symptoms ever in mind, second all suspected cases should be isolated, and when diagnosed, quarantined for at least six weeks; third, the patient's secretions from the nose, throat and intestines, disinfected, and carefully disposed of. Fourth, nobody in constant attendance on such cases, allowed to mingle with other persons, especially children. The virus in the secretions, thrive in darkness, and are destroyed by sunlight, unless the nervous symptoms demand a darkened room, the patient should be exposed to the sunlight. The hands of persons handling the secretions, should be frequently and thoroughly disinfected, before handling anything else, as has been proven in this epidemic, that mothers in this manner, infected their healthy children. Fifth, remembering, while it has not been conclusively proven, that all blood-sucking, insects and domestic animals carry this disease, it is best, however, to prevent their coming in contact with children. As to the drug treatment, we still advocate and use hexamethylin; experiments on monkeys have shown, that, if used early, it is of benefit. I am in the habit of using it in all suspected cases, both internally, and as a spray for the nose and throat. A lumbar puncture should be made early for diagnostic purposes, as well as to relieve the pressure, for the pains, warm baths, phenacatin, salol, bromide, other sedatives and opium should be used; iodide of potassium is of value in some cases; intra-muscular injections of strychnine later, is a good adjuvant. But it is to the serum that we look forward in the future. The serum from recovered or potent monkeys, or human beings has been employed, directly injected into the membranes of the spinal cord, several injections being nec-

essay. In France it has been used quite a little with good results. Human serum from convalescents or recovered patients, is difficult to obtain, even in epidemics. Netter reports 32 cases treated by intra-spinal injection of human serum, after withdrawing by lumbar puncture. he injects the serum in lesser amount than the withdrawn fluid; the serum was used from persons who had had this disease from twelve days to eleven years before: The best results were from serum from three months to four years; injections were made daily for eight days, and he reports wonderful results, especially as to checking the advancing of the paralysis. Meltzer uses injections of adrenalin solutions into the spine. Keep the child at absolute rest, disturb it as little as possible, this relieves the hyperesthesia, and helps the inflamed parts of the nervous system. German physicians think so much of this treatment, that they put the paralyzed limbs in plaster casts, and a plaster jacket of the spine, if necessary, until the acute stages subside; in this way deformities of the paralyzed parts are lessened or avoided. After all acute signs of inflammation have disappeared, and the pain and tenderness are gone, gentle massage, passive motion, and electricity should be used. The period of convalescence may last for one year, during which time the above treatment and muscle training, are the only things that can be done. From this time on the case falls from the hands of the pediatrician to that of the orthopedic surgeon.

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#### METHODS OF DIAGNOSIS IN ABDOMINAL DISEASE.\*

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It is my purpose today to discuss methods of diagnosis in abdominal disease. The discussion of such a theme must leave much unsaid, but I wish to point out certain essentials in the examination of patients who exhibit abdominal symptoms. The discussion will be limited to the more common forms of abdominal disease and no attempt will be made to cover the entire subject. The discussion will be one of methods and not of pathology. The diagnosis of genito-urinary conditions has become a special field and will not be considered.

Methods of diagnosis may be considered under four heads: (1) Case History: (2) Phys-

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ical Examination: (3) Laboratory Examination: (4) X-ray Examination.

History taking is by no means the least of the means at hand for arriving at a diagnosis. It often happens that a careful history leaves little to be determined by further examination. A definite history of gall-stone colic is often conclusive. Gastric ulcer, appendicitis, hyperacidity are all conditions in which a good history gives a very definite clue to the diagnosis.

Much has been said and written about history taking. We have worked out a system which we have found practical. The patient first tells what are his chief complaints. We aim to let the patient tell this without leading questions or interruptions. It is unpsychological to introduce questions of family history or history of past illness when the patient wishes to tell you about present symptoms. He is interested in what is making him sick and uncomfortable now and not in what his father died of or how many children he has. Under the heading of the chief complaints we endeavor to be concise. The patient has epigastric pain, nausea, constipation, loss in weight, vomiting or any other symptom that may be present. These symptoms are recorded in the order in which the patient relates them. He may not tell them in the order of their relative importance in making a diagnosis, but he has them in the order of their importance to him. Under the heading of "Onset and Development" the symptoms are amplified. How long has he had epigastric pain? How severe is it? Is it getting better or worse? Is it related to eating—relieved or made worse? Thus each symptom is amplified as to its onset and development.

When the patient has told you about his symptoms then one may ask about other things. Habits of eating or drinking, or the use of tobacco may have an important bearing on the diagnosis of abdominal disease. Under the head of previous diseases, injuries or operations a careful effort should be made to go into details as much as possible. This is especially true in cases of dyspepsia. Gastric or duodenal ulcer cases will frequently give a history of long continued trouble. A patient may forget to tell you that he vomited blood sometime ago or that he had a fainting spell after which he passed tarry stools. Not long ago a patient gave a history of sunstroke on three different occasions. On further questioning it appeared that these sunstrokes were probably massive gastric hemorrhages due to a chronic unhealed gastric ulcer. The history of jaundice following at-

tacks of epigastric pain may often be brought out if an attempt is made to do so.

The family history is often of considerable value. There can be no doubt that there are family tendencies to certain types of disease. You are all familiar with families in which several members have had appendicitis. The tendency to cancer in certain families is marked. What the explanation of this is I will not attempt to say. It may be due to environment, it may be due to something less accidental.

I wish then again to emphasize the importance of history taking. In every case where the symptoms have been persistent or where the diagnosis is not self-evident a careful history should be taken. It is a mistaken notion to think that time thus expended is not well spent. The general practitioner is as well able to do this as the man in a special practice and the development of the habit of careful history taking will save many errors in diagnosis.

The physical examination of a patient complaining of abdominal symptoms should be complete. It is a well-known fact that abdominal symptoms may be due to disease outside of the abdomen. Cerebro-spinal syphilis, pulmonary tuberculosis, hyperthyroidism, endocarditis and a long list of diseases may manifest themselves by abdominal symptoms. In general practice not every patient who comes into the office can be subjected to a complete physical examination, but patients who have had symptoms persisting over long periods of time or who appear to be suffering from some serious malady should have the benefit of such an examination.

In this connection I wish to call particular attention to the teeth and tonsils. Since the work of Rosenow we must understand the importance of focal infections in a great variety of abdominal disease. The recognition of pyorrhoea or septic tonsils may often be of value in diagnosis of peptic ulcer, chronic appendicitis or chronic inflammation of the gall-bladder. The blood-pressure should be taken in all such cases. There can be no doubt that hyperacidity and high blood-pressure are often associated.

A routine examination of the reflexes will often save the physician much embarrassment. The gastric crisis of tabes dorsalis has long been held as the bugaboo of the diagnostician. Routine examination of the reflexes will usually pick out these rare cases of cerebro spinal syphilis in which the predominating symptoms are abdominal. The presence of a marked tremor or an ocular paralysis may indicate a lesion of the nervous system that is responsible for abdominal symptoms.



In women a pelvic examination is always to be made, if one is to feel sure of a correct interpretation of symptoms. Nausea and vomiting, abdominal pain, constipation and a long list of symptoms are caused by a great variety of pelvic disorders. A patient may come for the relief of a long continued dyspepsia which is due to uterine fibroid. One frequently sees patients with a chronic pelvic inflammation treated for gastric disorders which are relieved when the cause of the trouble is properly dealt with. In dyspepsias particularly one should always be on the lookout for extra-gastric disease as the cause of gastric symptoms.

To make a proper examination of the abdomen the patient should have all clothing removed from the abdomen. Palpation can best be done in the absence of clothing. One should not rely on palpation alone. Inspection and percussion often are of quite as much value as palpation. Manifestly inspection and percussion cannot be properly done unless the patient is stripped. Smithies in his recent book "Cancer of the Stomach" puts the matter very pointedly. He vigorously condemns the "don't-let-me-annoy-you" attitude of the popular medical attendant.

With the patient properly prepared for the examination, one may make the entire examination very quickly. Free fluid, tumors, visible peristalsis and other gross deviations from normal may often be detected by inspection. Many abdominal diagnosis are mistaken because the physician has never inspected the abdomen. Palpation of the abdomen should be done carefully and deep palpation left until light palpation has rendered all the information that it can. With the palm of the hand laid lightly over the rib margin and instructing the patient to breath deeply, the liver outline or a distended gall-bladder can often be easily felt, when vigorous palpation with the finger ends will result in violent muscular spasm and the underlying viscous cannot be felt. By palpation one should accurately locate points of tenderness. Percussion will often reveal the outlines of tumors, detect the presence of fluid, or reveal the position of the abdominal viscera. By these means one obtains much information of very practical value in abdominal diagnosis.

In concluding this discussion of physical diagnosis, I wish to state that in my opinion every patient with serious abdominal symptoms should have a complete examination including not only the abdomen but the chest, glandular system, genito-urinary system, the nervous sys-

tem and by all means the mouth and throat.

Laboratory examinations are an important link in a diagnostic chain. Much has been said first and last about the relative value of laboratory examinations. Too little attention has been given to laboratory examination, too much attention has been given to laboratory examinations. What is the truth? Usually the truth lies at neither extreme but *in media*. Laboratory methods come and go and one cannot be trying out every new procedure that the laboratory enthusiasts may devise. One must use judgment as to what is practical for routine work and what may be of value in special cases. At all events it seems that no one would attempt to make abdominal diagnosis without some of the more fundamental procedures.

Urinalysis is never to be omitted. The diagnostic importance of the presence of sugar, albumin, casts, pus or blood is well-known. In this connection I wish to emphasize one thing which seems worthy of mention. An examination of a single specimen of urine will often miss important urinary findings. Right renal disease is often mistaken for appendicitis. Many cases of right renal tuberculosis are diagnosed as chronic appendicitis. A single specimen of urine may show no pus when a twenty-four hour specimen will show a large amount. A pus pocket in a kidney may discharge only intermittently and the examination of a single specimen may not aid the diagnosis.

The presence of large amounts of indican in the urine is undoubtedly of value in abdominal diagnosis. As a rule the quantity of indican in the urine varies inversely as the quantity of hydrochloric acid in the gastric juice. In hyperacidity cases the test for indican is usually negative. In cases of subacidity the amount of indican is excessive. The test becomes of considerable value in cases of suspected gastric cancer.

Routine blood counts and blood stains will give valuable data in many cases of abdominal disease. A leukemic spleen is easily mistaken for some other form of abdominal tumor. A blood examination will usually make the diagnosis plain. Pernicious anemia and gastric carcinoma are difficult to differentiate without a blood examination. Although the blood picture in the two conditions may be very similar, such an examination is necessary to a correct inter-

pretation of the symptoms. In cases of inflammatory changes also the detection of a marked leucocytosis is often of great aid in differentiating them from other abdominal diseases.

The Wassermann test has come to have a definite place in diagnosis and yet not enough importance is attached to it in abdominal disease. Gastric syphilis has of late been receiving much attention. In a recent article Eusterman (1) gives a review of the literature and reports twenty-three cases. The diagnosis between syphilis and gastric cancer or benign ulcer is difficult but a Wassermann test is an essential factor. Syphilis of the liver and gall-stones may be difficult to differentiate and a Wassermann may decide the question.

The Abderhalden reaction for cancer has not proved to be a generally useful diagnostic procedure.

The routine employment of a gastric analysis of a test meal gives much useful information. This fact remains in spite of argument. At times too much emphasis has been given to this procedure and too many conclusions drawn. Some have gone to the other extreme and have discarded it as a diagnostic procedure. There can be no doubt that it has a definite place in the diagnosis of abdominal disease. Many conditions may result in disturbed functions of the stomach. Many of these disturbances can best be recognized by the analysis of the test meal. Hyperacidity, anacidity, the presence of altered blood may be shown best by this method. The motor function can often be established by the amount of stomach contents recovered. The simple method of having the patient eat raisins the night before the test meal will often give positive proof of gastric retention. The demonstration of sarcines or the Opler-Boas bacillus is always suggestive of cancer. Other procedures, such as the tryptophan reaction and the Wolff-Junghan's test for soluble albumen do not seem to give enough information to make their general use practical in the diagnosis of gastric disease.

The examination of the feces for occult blood is a simple procedure and when the patient has been kept on a meat free diet, is of great value.

The routine careful examination of the urine, blood and stomach contents in the diagnosis of abdominal disease is not only valuable but necessary to a correct judgment of the pathology.

The Roentgen Ray in the diagnosis of abdominal disorders has gradually come to play an important part. Except in acute cases where the urgency is great, a Roentgen examination properly precedes every abdominal operation. The information obtained by this means cannot be secured by any other means. The surgeon by a sufficiently large incision and by a large amount of handling of the parts may inspect all of the viscera, but the X-ray can give information as to function and relation of the parts that is sometimes not revealed to the surgeon.

Much of the criticism that has been put upon the X-ray has been due to those who have expected too much from it. It is a means of diagnosis, but it does not stand alone. It adds another source of information concerning pathological states. To make an X-ray diagnosis will often lead to error. To use the X-ray as an adjuvant to other diagnostic procedures is to add a powerful ally. To make an X-ray diagnosis without using every other means at hand to aid in diagnosis would be as absurd as to diagnose a case from the patient's history without making any physical examination or to make a diagnosis from a urinalysis or blood examination alone. One might get it right sometimes, but the percentage of mistakes would be considerable.

The limits of this paper will not permit any extended consideration of methods in the application of the X-ray to the diagnosis of abdominal disease. I wish to consider some of the methods which can be used in the more common disorders and to consider a few of the more important of the X-ray signs of these diseases.

In gastric cancer there are certain signs that are of great value. When the stomach is filled with an opaque substance such as barium or bismuth, its shape and size and position may be studied. In addition its motor function may be observed. A permanent filling defect in the gastric outline is the best evidence of cancer. The defect must be permanent. One must make



sure that it is not due to unchewed food remnants in the stomach or to tumors outside of the stomach. It must not be due to muscle spasm, or to adhesions outside of the stomach. Under fluoroscopic screen such a filling defect is seen to prevent the normal folding and unfolding of the stomach outline. The gastric wall is made rigid by the growth. A scirrhus carcinoma involving a large part of the gastric wall may not show a filling defect but may show only a rigid contracted gastric outline with a patent pylorus and an absence of all peristalsis. In gastric cancer unless stenosis exists to a high degree the contrast meal leaves the stomach promptly. There is no pylorospasm and when the pyloric ring is involved it is likely to be rigid and patent.

In gastric ulcer there are certain generally accepted X-ray signs. A callous ulcer penetrating the wall of the stomach shows on the screen or plate as a bud-like projection. This is the so-called niche and is pathognomonic for ulcer. An accessory pocket is seen where the stomach has perforated and the process extended into adjacent tissues. Carmen (2) gives these two signs as conclusive for ulcer. These two findings while conclusive, are not found except in the type of penetrating or perforating ulcers. There are, however, other signs that are indicative of ulcer. A sharp indentation on the stomach wall is often found opposite an ulcer. This is the incisura. This incisura when due to ulcer is constant and does not disappear on palpation. If the incisura disappears on the administration of atropin, its diagnostic value is much less. An hour glass stomach may be due to ulcer. This is to be distinguished from the hour glass stomach due to carcinoma, adhesions, extra-gastric tumor, or muscular spasm. A marked gastric residue after six hours is often found in ulcer. This may be due to a spasm of the pylorus or in cases of ulcer at the pylorus to organic changes. A definite localized pressure-pain point over a point unsuspected of being the site of ulcer is of considerable value in diagnosis. A small fleck of bismuth left over some part of the gastric outline after the stomach is otherwise entirely empty is sug-

gestive of an ulcerated area to which the bismuth has adhered.

In the diagnosis of duodenal ulcer there are three signs upon which much importance is placed: (1) A constant deformity in the duodenal cap is perhaps the most significant sign of ulcer. This deformity may be a niche, an incisura or a diverticulum. In forming conclusions concerning duodenal cap deformities, one must consider adhesions, a distended or adherent gall-bladder and abdominal tumors. Deformities from these conditions can usually be differentiated from those due to ulcer.

(2). Rapid stomach emptying with vigorous peristaltic waves is indicative of duodenal ulcer and when accompanied by other signs of ulcer is of much value in diagnosis. The stomach will often be found free of the contrast meal at the end of one or two hours. However, one must remember that where the lesion has become obstructive, stomach emptying is delayed.

(3). A third sign of duodenal ulcer is tenderness over the cap of the duodenum. With the fluoroscopic screen one may absolutely localize pressure pain points. In cases of ulcer of the duodenum the point of tenderness is often very sharply localized exactly over the cap.

The diagnosis of gall-stones by the X-ray has brought much discredit upon the method. Many observers have committed the error of stating that there were no stones because no shadow of the stones has been seen on the plates. The percentage of biliary calculi that can be detected by modern methods of Roentgenography is reported very different by different observers, varying from 5 to 60 per cent. Whatever is the correct percentage, one may say that a negative diagnosis is never to be made from a failure to find the stones by the X-ray.

Other X-ray signs of gall-bladder disease are of value. Adhesions between an old inflamed gall-bladder and the stomach or first portion of the duodenum will often result in deformities seen in these organs. The finding of the pylorus in the region of the gall-bladder is suggestive and this is referred to as the cholecystic position of the stomach. Tenderness localized

over the gall-bladder region by the fluoroscope is of considerable value.

In the diagnosis of chronic appendicitis much can be learned by means of the contrast meal and the fluoroscope. By this means the appendix can be accurately localized and in some cases actually seen. One may make pressure over the appendix and know that the appendix is exactly under the palpating finger. One is surprised to see how often the appendix is not in the classical location. It may be up under the costal margin or down in the pelvis. A tender point in McBurney's region may be not at the site of the appendix, but at the site of the pylorus or duodenal cap. A tender point over the pelvis may not be due to disease of the uterine adnexae but to a sore appendix. The use of the fluoroscopic screen in palpation of the abdomen gives the examiner an advantage of no little importance. A retro-caecal appendix can often be demonstrated by the screen or an X-ray plate. Peri-caecal adhesions and membranous bands between the loops of the colon are as a rule demonstrable under the fluoroscopic screen.

I have thus briefly mentioned some of the ordinarily accepted X-ray methods in the diagnosis of abdominal disease. The application of similar methods to many other intra-abdominal conditions yields equally valuable information. There can be no doubt that the X-ray is a valuable addition to our methods of physical diagnosis.

In concluding this discussion I wish to repeat what I have said before. In order to make accurate diagnosis of abdominal conditions one should correlate a careful history, thorough physical examination, laboratory tests and X-ray examinations. By making use of all these means and considering all the evidence one will make fewer mistakes than if undue emphasis is laid upon any one procedure.

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## REPORT OF A CASE OF POSTOPERATIVE TETANUS.\*

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In reading current medical literature, how easy it is to note the various reports of comparatively rare cases with only a passing interest, at the time. Not until a direct personal encounter is met with one of these instances, existing in our own patient, do we become suddenly inflamed with a scientific enthusiasm, sufficient to interest us deeply. It is at this time that thorough clinical investigation is usually made, and a search of the past and present literature undertaken, in quest of similar case reports. Such has been my own personal experience of recent date, in which I had to deal with a case of postoperative tetanus, subsequent to an orchidectomy and hernioplasty. Postoperative tetanus being of somewhat infrequent occurrence, it has seemed wise to report the case.

#### CASE REPORT.

The patient was a young man, single, aged 22, and by occupation a timekeeper in a furniture factory. He consulted me for a "rupture," which had been present since childhood. Other history was negative. Upon examination, he was found to have a right sided, inguinal hernia, and an undescended testis of this same side. Operation was advised.

Operation.—On October 30th, orchidectomy and Bassini's operation for the repair of hernia was performed. The peritoneal sac was exposed and opened in the usual manner and the testicle found to lie within the internal inguinal ring. Owing to shortness of the spermatic cord and its accompanying vessels, together with some few adhesions to the surrounding peritoneum, an attempt to bring the testicle into the scrotum for suitable anchorage there, proved futile. Consequently, cord and vessels were ligated and the testicle removed. The deeper structures and skin incision were sutured in layers, in the usual method, chromic catgut Nos. 1 and 2, and two silkworm stay sutures being used. I am unable to state whether the suture material used was exclusively that manufactured by one well-known firm, or whether I used material put up by two such concerns.

Postoperative Complication: Other than necessity of catheterization, and a temperature of from 99 to 100°, for the first three days, convalescence was uninterrupted until the evening of the ninth day following operation. At this time, the patient complained of soreness in the lumbar region of his back, and did not eat his supper. The next morning, he complained of a sore throat, soreness in the back of his neck, and soreness and stiffness in the lumbar muscles, stating that he felt he had caught a "cold." His temperature and pulse were normal, the pharyngeal mucous membrane only slightly reddened and inflamed, and there was no definite rigidity of the lumbar or neck muscles. During the night of the tenth day after operation, the nurse noted that the patient was restless, that sound and light irritated him, that he complained of soreness and stiffness of the jaw muscles and displayed some retraction of the head.

In the morning he was able to open his jaws only half-way, and had some difficulty in swallowing; upon stimulation of the deep reflexes he had twitching contractures of the facial and neck muscles, with definite rigidity of the muscles, at the back of the neck. It was at this time that I became convinced that the case was one of tetanus, although it had previously occurred to me, that possibly because of some disturbance of the internal secretions, due to removal of the

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testis, some of these symptoms might have been produced. However, I determined to take no chances, and questioned the patient for history of a previous injury, of recent date, supplementing it by a careful physical inspection for evidence of the slightest puncture wound or abrasion, whereby infection could have possibly occurred. These proved negative. The incision was uncovered at this time and the silkworm sutures removed. Perfect, first intention union had resulted and there was not the least evidence of any infection whatsoever. The patient was at once given 3000 units of antitetanic serum, intramuscularly, and sodium bromide, grs. XXX, by mouth, at intervals of every two hours. That night he had become progressively worse; temperature was normal; pulse was 120.

The twelfth day after operation, the temperature was 100.6°, axillary, and the pulse 110. There were exacerbations of tonic convulsions, produced irrespective of external stimulation, almost constant muscular spasms about the face and neck, a definite opisthotonos, complete inability to separate the jaws to even put the tip of the tongue between the teeth, and during the convulsions the patient complained of great abdominal pain. Definite *risus sardonius* was present and the patient was perspiring freely. He had contractures of the extremity muscles, with exaggerated reflexes. His mind remained absolutely clear, throughout the course of the disease. It was planned to give the patient sodium bromide, grs. 60, and chloral hydrate, grs. XX, in combination, per rectum, every four hours, to allay the convulsions, and the antitetanic serum in 5000 unit doses, twice daily. Later in the day, I determined to give the serum in 1500 unit doses intraspinaly, along with chloretone, grs. 60, dissolved in hot olive oil, by mouth. That afternoon, we found the patient unconscious, in a state of constant tonic convulsions, with a rectal temperature of 106°; a weak, rapid, irregular pulse and irregular respiration, with extensive mucus rales. He died at 6:45 p. m. of paralysis of respiration, the heart beating some little time after all breathing had ceased.

The incision was opened, post mortem, and a small amount of sero-pus discovered beneath the fascia, in the upper one-third, of the incision. Specimens of it were taken, aerobic and anaerobic cultures made and found to contain no tetanus bacilli. Some few colon bacilli were found.

Both manufacturers of the catgut material were notified, and at their requests, one dozen samples of each individual make of sutures were examined, cultures and microscopic investigation being made in each instance. Tests proved absolutely sterile; for any living organism.

In making a brief review of the medical literature at my disposal, I have found that postoperative tetanus is not as infrequent an occurrence as one would naturally consider at first thought. The most extensive and complete bibliography of cases, which I encountered, was that of Dr. Reuben Peterson, of Ann Arbor. (1) He cites a list of 150 cases, 101 of which had occurred prior to, and inclusive of, 1890 and 49 of which had occurred since that date. These are collected from the medical literature at large, complete and definite reference being given in each instance. Previous to the publication of Peterson's article, R. Kleinertz reported 33 cases, and Richardson 21 cases, and since 1909, in looking over references, I have noted the reports of several cases, a tabulation of the exact number not being attempted, owing to insufficient data.

In order to consider the various plausible sources,

through which infection with tetanus bacilli, just prior to, or at the time of operation, might occur, I have prepared the following list:

1. Catgut.
2. Previous trauma of obscure origin.
3. Faulty sterilization of instruments and dressings, or lack of scrupulous preparation of the field of operation.
4. Infected dressings from the patient's fecal movements, fingers, or those of an unclean attendant.
5. Introduction of infected foreign matter into the incision at the time of operation, such as dust or particles of matter falling from an overhead chandelier, etc.
6. Following the use of contaminated vaccines and serums, or gelatin in such hemostatic preparations, as are sometimes on the market.
7. Following unsterile hypodermatic injections.
8. Idiopathic sources, in which no definite mode of entrance could be considered.

Of these eight possible sources of infection, that most likely to come under consideration first is the catgut suture material. Catgut is prepared from the small intestines of healthy, freshly killed sheep, and by various processes is made into material known as "raw gut," which is the bulk stock used in the manufacture of sutures. Tetanus bacilli are known to be sometimes normal inhabitants of the intestines of many ruminants, including the sheep. It does, therefore, seem possible that these bacilli may be present in "raw gut," and owing to the extreme resistance of the spores, withstand certain degrees of sterilization. The spores will withstand tremendous heat, active chemical and antiseptic agents, sometimes having been reported to exist, after being submitted to boiling water for ten, fifteen and even sixty minutes. And yet, after such rigid measures as are described, in the preparation and sterilization of catgut, (7) it does not seem likely. However, cases of postoperative tetanus have been known to follow the use of catgut suture material. In the 33 cases of R. Kleinertz, (3) he reports three cases in which "cumol catgut" had been used; three with catgut prepared by the Hofmeister formalin technic; three by the Saul and two by the Bergmann technics. The outcome is not known in a number of these cases, but recovery is mentioned in only two, and death in seventeen. In Richardson's 21 cases, the catgut was examined in fourteen, and bacilli found in only four cases. However, it was impossible to cause tetanus in animals inoculated with cultures from these four. Peterson does not definitely state that catgut was responsible for infection, and neither am I able to prove anything, relative to sutures.

Perhaps, in some operative cases in which catgut had been used, a slight trauma of obscure nature had been sustained by the patient, immediately prior to the operation, and infection with tetanus has resulted. A puncture wound or abrasion, of trivial nature, with some infected agent, would be the causal factor in such an instance and yet not recalled

until the disease had begun to develop, postoperatively. Nantonek (4) reports, that tetanus may occur from spontaneous skin lesions, and suggests that if such is the case, why is it not likely to happen from lesions of the air passages, teeth, tonsils, alimentary canal and even the Eustachian tubes? The organism could reach the mouth, by being placed there, in partially cooked or raw vegetables, grown in soil contaminated with fresh manure or otherwise, and thus owing to extreme resistance, live to be placed in some cavity, slight crypt or abrasion. (5) grow and develop tetano-toxin.

Today, the principles of aseptic surgery tentatively preclude tetanus infection by means of improper sterilization of instruments, dressings, hypodermatic injections, unscrupulous preparation of the operating field, dust in the operating room, or infected dressings from the patient's fecal dejecta. One point to be mentioned, is that of accidentally dropping instruments upon the floor and quickly resterilizing them for use again. The floor being the logical place for tetanus organisms to exist, this procedure should be emphatically considered. Likewise, where the anus is in close proximity to the incision, great care should be exercised against the infection of clean dressings with fecal matter. Tetanus organisms are not normal inhabitants of the human intestinal tract, but could reach there by way of partially cooked or raw vegetables. The use of contaminated vaccines and serums, or commercial hemostatic preparations of gelatin, are mentioned in the literature as factors of infection. However, I shall not consider them in detail.

Richardson (2) brings out that there are certain theories relative to so-called cases of idiopathic, postoperative tetanus. He bases his contention on a previous report by Hamilton, that there are a certain group of diseases among sheep, the symptoms of which cannot be distinguished from those of tetanus. In these diseases the bacilli are normal inhabitants of the sheep's intestine, but at certain periods of the year they pass from the lumen of the bowel into the blood, where they become bacteriolized and the liberated toxins give rise to the symptoms of the various diseases. During these seasons, the bacilli are said to be found in the peritoneal cavity, and in no other part of the body. Richardson states that these diseases are endemic in certain parts of the British Isles, and the twenty-one cases, collected by him, are stated to have occurred only in those districts, in which the tetanic group of sheep's diseases was endemic. He further states, that more than 90 per cent. of the cases of postoperative tetanus, followed operations in which the peritoneal cavity had been opened. He accounts for this sequence of events, by supposing that the disturbance aroused, by the opening of the peri-

toneal cavity, was of such a nature as to favor activity of the bacilli, which probably would have remained dormant had no operation been performed. It is, indeed, a demonstrated fact that the mere opening of the abdomen can effect the interaction of a patient and bacilli already present in the peritoneum, an instance being that of tuberculous peritonitis, when a small incision, without any interference, is followed many times, by immediate improvement, of a local condition and sometimes ultimate, complete recovery.

Matas (6) believes, that certain forms of postoperative tetanus, especially those following operations on the intestines and other regions liable to fecal contact, are caused by the contamination of the alimentary canal with living tetanus bacilli which have entered the system in uncooked vegetables and fruits cultivated in fertile soil. In all such cases, as have come under his observation, the patients have eaten of these food stuffs only a few hours prior to the operation. He therefore suggests certain dietetic and purgative procedures before operation.

#### CONCLUSIONS.

In closing, it therefore seems proper, that the following conclusions be drawn:

1. Statistically, tetanus is one of the rarest postoperative complications, and yet it must be considered as such a possibility.
2. The infection may occur by way of catgut, but without definite, conclusive proof, we should not condemn the suture material.
3. It does seem likely, that infection is introduced at the time of operation, but the exact source is many times, quite obscure.
4. Other factors, such as previous trauma, sterilization of instruments, preparation of the field, care of dressings, clean operating rooms, etc., do enter into more or less deep consideration.
5. The contributions, to the literature, of Richardson and Matas, appear plausible, yet without further investigations along these lines, no great amount of stress can be put upon them.

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## TRANSACTIONS

OF THE

## Clinical Society of the University of Michigan

Stated Meeting, December 6, 1916

The President, CARL D. CAMP, M.D., in the Chair

Reported by REUBEN PETERSON, M.D., Secretary

A REPORT OF TWO CASES OF VON  
RECKLINGHAUSEN'S DISEASE.  
(NEUROFIBROMATA.)

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Michigan.)

The following is a report of two cases which were treated in the Surgical Clinic during the summer of 1916. They are of interest because they were a mother and son, each exhibiting different types of the same disease, one typical, the other almost unsuspected.

The first case, Mrs. S. V. a housewife, aged 25, entered the University Hospital on July 29, 1916, primarily for treatment of a large tumor on the left thigh. Examination on entrance, however, disclosed another condition of rather greater interest for this paper; a generalized neurofibromatosis.

The large tumor started without any known etiology about one year ago as a small mass on the posterior aspect of the left thigh. This gradually increased in size and was removed in May, 1916. It promptly recurred and a second operation was performed in July, 1916. But the growth took on a very malignant course and recurred with startling rapidity. The home physician refused to operate again and the patient was sent to the Clinic.

Examination on entrance showed a large fusiform swelling along the posterior aspect of the left thigh occupying the whole mid portion of the thigh. (Fig. 1). A long recent surgical scar traversed the length of the tumor. The mass was quite freely movable and not attached to the bone. The skin over it was red and shiny with some dilated veins coursing over it. A diagnosis of sarcoma was made and a radio-

graph ordered. This showed: "A soft tissue tumor of the posterior aspect of the thigh apparently entirely free from the femur." A course of Coley's mixed toxins was immediately started. Operation was delayed because the patient was in such a weakened condition that operative intervention was contraindicated. The toxins were given to a maximum dose of twenty minims and on August 27, the patient was discharged.

On September 17, 1916 the patient re-entered the Hospital. At this time a small portion of the tumor was removed under local anesthesia for pathologic diagnosis. The report returned was: "Small spindle celled sarcoma." The patient was in a still weaker physical condition and operation was again deemed inadvisable and Coley's toxins were again given. One week later the patient returned to her home.

The other feature found at examination was the presence of numerous cutaneous and subcutaneous nodules over the entire body. These were small, round, firm and painless, freely movable and located along the distribution of the peripheral nerve trunks. Associated with these masses, was a change in the pigmentation of the body, numerous larger and smaller brownish spots. In securing the history of the case, the patient stated that she had had these lumps as long as she could remember. An interesting fact brought out was that her mother, brother and a sister had the same condition. The lumps never distressed her and in themselves would never have brought the patient to a hospital. The laboratory findings were negative and the Wassermann test on the blood serum was also negative. A clinical diagnosis of Von Recklinghausen's disease (neurofibromatosis) was made. Two of these

little tumors, one cutaneous and one subcutaneous were removed under local anesthesia. In removing the subcutaneous tumor, a length of nerve was drawn out and along it were numerous smaller nodules. The pathologic

tumor was firm, smooth, did not pulsate, was not reddened nor hot, and was only moderately tender. The laboratory findings were normal and the Wassermann reaction on the blood serum was negative. A radiograph gave no



Figure 1. Case I. Mrs. S. V. Von Recklinghausen's disease showing the small neurofibromata. The large tumor on the posterior aspect of the thigh is a large sarcoma.

report on these specimens was: "Neurofibromata." Numerous young nerve fibers were found in both specimens examined.

CASE 2. The second case is that of J. V. aged 4½ years. He was brought to the Hospital on August 12, 1916 because of a large swelling on the right side of the face in the region of the parotid gland. This was first noticed when the child was about two months old and appeared as a small bean sized tumor of the right parotid gland. It grew slowly till the spring of 1916, when it increased suddenly in size. The boy was taken to a hospital and an operation for removal of the tumor was performed in July, 1916.

Examination on entrance showed a swelling in the region of the right parotid gland, over which ran a perpendicular surgical incision but recently healed. (Fig. 2). The auricle was pushed out from the face and the external auditory canal was nearly closed by the swelling. There was a partial right sided facial paralysis. The

information. A letter was written to the home physician to find out what was done at the previous operation, what the pathologic diagnosis was and whether the seventh nerve palsy was present at that time. The following is the surgeon's report of the case:

"We operated on the boy about six weeks ago after giving an unfavorable prognosis. At operation a large mass was removed, this mass extending up in temporal region, over the parotid and down in the neck. The clinical diagnosis of congenital lymphangiomata (hygroma colli congenitum) was made. The nerve was not involved. We advised the father that there might be a return. We refused to operate on mother. P. S. Removed all pathologic tissue. The growth extended in cord-like arrangement into deeper structures of the neck."

On August 26, 1916 an operation was performed in the Surgical Clinic. An incision was made along the line of the former incision. The structures were separated to the tumor



which presented a firm capsule which was incised. By blunt dissection with the gloved finger the area was explored. Suddenly there was an extremely brisk hemorrhage. The blood poured out in an alarming fashion. A gauze



Figure 2. Case II. J. V. Von Recklinghausen's disease showing the large tumor in the right parotid region caused by the plexiform neurofibroma of the facial nerve.

pack was jammed into the wound and strong pressure applied but this was wholly inadequate to control the hemorrhage. Quickly the neck was bared and an incision made along the anterior border of the sternocleidomastoid muscle. The muscle was retracted and the jugular vein and carotid artery were exposed. The vein was clamped but the hemorrhage did not stop and the carotid artery was clamped. This controlled the flow of blood and the two vessels were ligated. Gauze was packed into the cavity, the neck wound closed and a tight bandage was applied over the tumor. A portion of the tumor tissue was removed for pathologic diagnosis. The patient quickly recovered from the effects of the operation; the tumor decreased somewhat in size and on September 7, the patient was discharged to be cared for at home.

The specimen removed at the time of operation was examined by the pathologist who returned this rather unexpected report, "No evidence of parotid or parotid tumor in the small bits of tissue examined. Atypical connective tissue, blood vessels and nerves. Probably a congenital neurofibromatosis but positive diagnosis can not be made from this bit of tissue."

The first case gives a rather typical picture of the classical description made by Von Reck-

linghausen in 1882. He speaks of a "generalized affection characterized by the presence of small multiple tumors on nerve trunks, on the skin, associated with patches of pigmentation." Adrian in 1903 on a basis of 447 cases which he was able to gather from the literature, gives a very complete description of the disease, the theories as to etiology, symptoms, pathology, course, treatment and prognosis. He speaks of "symptoms of the first order" comprising tumors of the nerves, tumors of the skin, and certain pigment anomalies. Symptoms grouped in the "second order" are those of functional disturbances, intellectual and psychic changes, and maldevelopments of various kinds. So far as we could determine, the first case presented all the characteristics mentioned by Von Recklinghausen and comprised in Adrian's symptoms of the first order. None of the symptoms characteristic of the second order was discovered. In the literature there is only a limited number of cases in which nerve fibers have been demonstrated within the cutaneous tumors. In most cases their connection has been inferred from the presence of similar tumors on the palpable nerve trunks. This case did show the presence of true nerve tissue in the cutaneous nodules as well as those definitely associated with the nerve trunks.

An interesting conjecture, but one which we cannot prove, is the question whether or not the soft tissue spindle celled sarcoma developed from a preexisting neurofibromatous tumor, Ziegler in his pathology (page 419) states that cases occur in which neurofibromata take on a sarcomatous character and thereby become malignant. The portion of the tissue examined in this case was a pure sarcoma and it was not possible to show any nerve elements. Therefore, any vital connection or sequence between the two conditions can only be inferred.

The second case showed none of the generalized nodules either in the skin or along the nerve trunks, and there were no patches of pigmentation. We believe, however, that it is a case of neurofibroma for the following reasons:

The family history is suggestive. Most writers on the subject call attention to the hereditary nature of the disease. In our case the condition has appeared in three generations. The view most commonly held and one best founded is that this condition arises on an inborn tendency, an anlage, which exerts its influence at variable times after birth and leads to the proliferation of these particular structures.

The clinical findings at the first operation are in harmony with our diagnosis. The home surgeon's description is very well in keeping with the so-called "plexiform" type which is "characterized by the development in the domain of one or more nerve branches, of a convolution of tendril-like, twisted or interwoven, thickened and nodular nerve strands." In this process nerves are lengthened and thereby rendered tortuous and at the same time the nerves are increased in number. (Ziegler's Pathology).

Von Bergman in his *Surgery* (Vol. I, P. 504) reports a case of a child described by Soldan, in which the branches of the seventh (facial) nerve were converted into thick strands and beads in the deeper parts of a diffuse swelling occupying the cheek and thus constituting the chief mass of a tumor. Our second case as described in his physician's letter and our own findings, are quite identical with this case of Soldan's.

The pathologic report, rendered independent of all suggestion as to the possible nature of the condition, quite clinches the evidence and makes the diagnosis tenable.

#### DISCUSSION.

DR. CHARLES L. WASHBURN: The report of these two cases is interesting, largely because of the surgical significance of the involvement of the nerve trunks, especially the large nerve trunks and the blood vessels. It indicates that a person who is to operate for multiple enlargement of subcutaneous tissues of the body has to be on the lookout for involvement of important nerves and blood vessels. I remember well when we opened this tumor that we were somewhat surprised to note that there was an intimate connection, not only between the jugular vein and the tumor, but also between the carotid artery and the growth. There was, as I remember, no nodular part of the tumor and a capsule rather dense containing a blood clot. As the blood clot was removed, we opened directly into the jugular vein and the carotid artery. The facial palsy present before the operation, which we had thought was caused probably by cutting of the facial nerve at the time of the former operation, began to clear up within a few days after the removal of the pressure, and I think it cleared up quite extensively before the patient was discharged. The packing was removed about the fifth day and there was no recurrence of the hemorrhage.

It is a pretty good rule to follow that any tumor in the neighborhood of the parotid gland should be closely examined for possible connection with the blood supply of the neck. I think Dr. Barss and I learned one thing from this case, that is, that when hereafter we have a tumor of the parotid region to operate upon, we shall first uncover the blood supply controlling that region and not be under the necessity of making such a rapid dissection down onto the carotid artery and jugular vein.

DR. ROY A. MCGARRY: I would like to ask whether the conditions of mollusum fibrosum and multiple fibromata are supposed to be the same thing among neurologists. I saw five cases which were considered by dermatologists as synonymous with Von Recklinghausen's disease. Most of these cases had no neurologic findings, though one man developed a painful tumor on the frontal nerve. The other tumors on the body were pigmented but there were no subjective symptoms. Also in two other cases there were a few small tumors over the body with no pain whatever connected with the tumors. I would like to know whether the conditions of mollusum fibrosum and Von Recklinghausen's disease are to be considered identical.

DR. CARL D. CAMP: I understood Dr. Barss to say that the jugular vein and the internal carotid artery were ligated. I think it would be interesting if Dr. Barss would say what symptoms, if any, appeared to follow the ligation of the internal carotid artery. In some cases the patient develops transient hemiplegia from this procedure and I believe there is a case now in the medical wards in which the patient has a hemiplegia in which the tentative diagnosis is thrombosis of the internal carotid artery.

DR. UDO J. WILE: I would like to say a word with regard to Dr. McGarry's query. There is a great deal of confusion existing as to what constitutes Von Recklinghausen's disease. In the original description, Von Recklinghausen's syndrome was a neurofibromatosis. Clinicians and those who have studied the pathology of this disease today are prepared to say that a case of clinical Von Recklinghausen's disease need not necessarily be neurofibromatosis. It may be, and frequently is a connective tissue tumor arising from connective tissue around the blood vessels. To be a Von Recklinghausen's disease clinicians feel that a case must have besides the tumors, pigmentation and the spontaneous disappearance of some of the tumors over a course of a long period of time. Conversely, there are many cases of neurofibromata which are in no way related to Von Recklinghausen's disease. That is, they are not associated with heredity, pigmentation and spontaneous involution. Such cases usually occur some time during young adult life and have not the same clinical picture or history. Mollusum fibromata are usually senile changes which have nothing to do with Von Recklinghausen's disease. I think this disease should be spoken of as multiple familial fibromatosis, and the connection with the nerve sheath should be disregarded.

DR. BARSS: In reply to Dr. Camp's question as to the symptoms following the ligation of the carotid artery, the most pronounced symptom was the stopping of the flow of blood. As a matter of fact, we could not discover even temporary symptoms following the ligation. The patient was extremely drowsy, but outside of that, there were practically no other symptoms. The boy, so far as we could tell, when he left the Hospital, was perfectly normal except that there was still a partial facial palsy on that side.



## DEMONSTRATION OF A CASE OF MYCOSIS FUNGOIDES.

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(From the Clinic of Dermatology and Syphilology, University Hospital, Ann Arbor, Michigan).

The case which I wish to present is one of mycosis fungoides limited to one arm and shoulder. A little over a year ago Senear reported a case of localized mycosis fungoides from this Clinic and at that time he reviewed the literature. While he found a great many cases of mycosis fungoides, very few localized conditions were reported. The patient has changed so greatly in appearance since first coming into the Hospital that I will give you a description of the lesions when he first entered.

The patient is a slightly anemic man of good appearance. The scalp is clean. The eyes react sluggishly. The left arm is greatly swollen, being about twice the size of the right. Over the upper third of the forearm there is an irregular ulcer about four to five inches in its long axis and two inches across, the long axis being across the arm. The edges are irregular, slightly raised and erythematous with a slight seromucous exudate, the base being covered by a thin black crust. Over the elbow there is a much larger ulceration irregularly round, extending about half way around the arm and about six or seven inches in diameter. The base of this lesion is necrotic with marked loss of tissue at its center, forming a crater-like lesion. The tissue immediately surrounding these ulcerations is slightly erythematous, infiltrated, and in places covered by a slight scale. On the under side of the elbow there is a small ulcer the size of a quarter with a rolled border and a clean base, which has a serosanguinous discharge. Just above the large ulcer on the outer aspect of the arm there is an irregular raised lesion which is composed of small confluent nodules of a purplish color and covered by a slight scale. In the center of these lesions there is a depression which consists of blanched out tissue resembling a scar, the site of an involuted lesion. On the upper portion of the arm over the outer axillary fold is a large circular lesion which is raised about an eighth of an inch above the normal skin. It has a nodular appearance and is covered by a slight scale. Throughout the lesion there are small points of necrosis. The skin extending from the lesion under the arm is red, infiltrated and is also covered by a slight scale. Its extent is, however, very definitely demarcated. The edema of the entire arm is very marked, being more pro-

nounced over the back of the hand and forearm. The glands in the axilla are markedly enlarged.

The general examination is negative. The blood shows one interesting finding, 34 per cent. eosinophils on entrance. A count taken today by Dr. Gilbert showed 24 per cent. eosinophils. The leucocytes have been as high as 30,000. The patient has received X-ray therapy with iodides and the lesions have decreased very much in size. The large lesion on the back of the arm has largely disappeared.

The symptomatology of mycosis fungoides is variable. However, in the typical cases it usually goes through four distinct stages. The



Figure 1. Mycosis fungoides showing nodular and ulcerative lesions on left arm.

first stage, or the so-called premycotic eczema, may vary anywhere from a few months to several years duration, one case being recorded where it extended over a period of twenty years. The nature of the eruption is also variable, usually being eczematoid in character, which does not respond to treatment. In some cases it may be urticarial or even erysipeloid. After a variable length of time the second stage, that of infiltration, is reached. As the infiltration increases tumors are formed which are characteristic of the third stage. Sooner or later these tumors ulcerate and become progressively larger, and the last or fourth stage of the disease

is entered upon. If the disease is untreated until this stage is reached the patient usually dies from metastasis and absorption.

As to therapy, some cases have responded to X-ray and potassium iodide. However, the cases which show the most marked improvement under this therapy are those seen before ulceration occurs. This has been true in the present case, as the large non ulcerative tumors have practically disappeared while those with ulceration are about the same size as at entrance. The patient's general condition remains unchanged.

Inasmuch as there are several theories as to the etiology of the disease I should like to have Dr. Wile discuss the relative value of each.

#### DISCUSSION.

DR. UDO J. WILE: As Dr. Elliott has brought out, this case is unique in its distribution. The condition is most often generalized. The customary name of the disease, mycosis fungoides, is a bad name as there is nothing mycotic or mycelial about the condition at all; so the name has been replaced in modern literature by "granuloma fungoides."

I think we may say that we know as much about the etiology of granuloma fungoides as is known about the etiology of leukemia. There is a great deal of speculation as to whether it is infectious, or primarily a disturbance of the blood forming organs. The theory which has the greatest interest is that there is a distinct relation between disease of the lymphogenous structures and granuloma fungoides. There are cases recorded of typical granuloma fungoides in which there are typical pictures in the blood of lymphatic leukemia. To complicate the matter, there are pictures of leukemia of the skin with tumor which look not unlike cases of granuloma fungoides. There are cases of leukemia of the skin in which the blood picture shows nothing, the so-called aleukemic leukemias of the skin. Paltauf, who has made an extensive study of the relation between lymphatic leukemia and granuloma fungoides, is of the opinion that the two, if not identical, are at least related diseases, and he bases this belief on the pathologic findings. If one were to examine this tumor, as we did, under the microscope, one finds a picture so strikingly similar to the leukemic infiltrates of the skin, that it is difficult to make a differential diagnosis. There is a proliferation of connective tissue which is filled with many small round cells. Histologically the cells are of the small round cell type. There are scattered mast cells, plasma and giant cells, but the great bulk of the infiltrate is similar to that seen in leukemia.

This is the third case that has been reported from this Clinic. The first one has gone down into the literature and will be recorded all over the world, the case which my predecessor, Dr. Breakey, treated here for a number of years. The extent of mutilation and destruction seen in that case is paralleled by no other disease except lepra mutilans. In this case the picture was more terrible because the lesions were ulcerative and destructive. The second case

was the case which Dr. Senear reported and was a localized lesion. This is the third case.

Of some interest is the semilunar kidney shape of the lesion. The plaques in the second stage of the disease take a distinctly horseshoe or kidney shaped contour.

There is a metastasis to the viscera in the majority of these cases at the postmortem. The intestines particularly are the site of involvement, but nodes are found in the spleen, kidneys and all organs.

DR. ELLIOTT: The question was just asked when this condition began. The eczematoid condition began two years ago. The tumor was noticed July 4, 1916.

There are only two things which come into the differential diagnosis, sarcoma and mycosis fungoides. In mycosis fungoides we have the four stages, eczematoid, infiltrative, tumor formation, and ulceration. Sarcoma occurring on the skin is usually smaller and does not ulcerate. In Dr. Senear's case, it was impossible to make a diagnosis without the pathologic findings as the lesions very closely resembled sarcoma.

### THE RELATION OF PERNICIOUS ANEMIA TO INFECTION. REPORT OF A CASE.

L. HARRY NEWBURGH, M.D.

(From the Medical Clinic, University Hospital, Ann Arbor, Michigan).

This case is interesting because of the suggestion in regard to the etiology of pernicious anemia. I will read the history first.

She was a married woman, aged 52, a housewife. She came here because she was weak. There was nothing in the family history. She had had some of the children's diseases. She did not have rheumatic fever nor tonsillitis, but did have typhoid at five years of age.

Her present illness began twelve years ago when she had hemorrhages from the bowel. These were large hemorrhages and occurred at irregular intervals until 1912. Since then there have been no hemorrhages. Accompanying the hemorrhages there was great weakness and dizziness. The patient has also had severe headaches, some loss of appetite and considerable edema. She has been dyspneic, especially at the time of the hemorrhages. At that time there was also palpitation. Six weeks ago the picture changed. She began to have diarrhea following which she became very weak, for which condition she came to the Hospital. Up to six weeks before entrance, which was the 20th of October, she had been doing her work. She has had some fever but no chills.



The history is quite indefinite—weakness, an old history of large hemorrhages from the bowel which have not occurred since 1912, then the vague history of weakness and the recent diarrhea.

Examination showed a woman with extreme pallor, dyspneic, with edema of the legs, and some fluid in the abdominal cavity. There was nothing in the lungs. Her heart showed a mitral stenosis and regurgitation with irregular pulse. Her blood was typical for pernicious anemia. There were a number of examinations by Dr. Gilbert. The red counts averaged about 800,000. The white count was continuously low, averaging about 3,000. The hemoglobin was 25 per cent. Thus she had a positive color index. Differential count, polymorphonuclears 62 per cent., lymphocytes 27 per cent. Numerous blasts. Examinations of the urine, stools and Wassermann tests were negative. Also the neurologic examination was negative.

Thus the positive findings on physical examination were the extreme pallor, lemon yellow color typical of pernicious anemia, the heart lesion, the blood picture which could not be distinguished from pernicious anemia, and fever. She ran a fever which gradually diminished during her stay here. It averaged 100° to 102° during the first week. During the second week it was a little lower. During the last week of her stay she had practically no fever.

The question which interests us is the relation between the fever, the heart and the anemia, and the large spleen, which I neglected to mention.

We have made two blood cultures, both positive. We are not able to state definitely what organism is present. Probably it is a streptococcus.

During the last few years the term pernicious anemia has been considered a rather bad one by many clinicians because pernicious anemia has been considered synonymous with primary anemia. We are beginning to believe that pernicious anemia is not primary. In other words, we believe that what we have called pernicious anemia is always secondary to something else, that it is nothing more than a secondary anemia with special characters. Of course, when we get any etiologic clue, we consider it of great interest. We know that this type of anemia

occurs in Scandinavia very commonly following infection with *bothriocephalus latus*. On the Atlantic coast of this country such cases are not at all unusual. That anemia is certainly not primary because the mere removal of the worm cures the anemia. Then there is another group of cases which definitely follow pregnancy. There is one at present in the ward. The third group includes those which result from repeated small hemorrhages. I have seen two cases following hemorrhoids, both diagnosed as pernicious anemia and both cured by removal of the hemorrhoids. Then there are cases which are thought to be connected with syphilis, and there is such a case in the ward which seems to be making some improvement. There are other cases which may be connected with tooth infection. That, of course, is more difficult to prove.

Here we have an example which seems to be very definitely connected with an infection. There is the organism and the blood picture. As far as I can tell, there are no such cases in the literature as I have not been able to find a report of a single case of pernicious anemia from which organisms have been obtained in pure culture from the blood.

Of course, the other question is whether this woman has two diseases, an acute infectious endocarditis which is common enough, and a so-called pernicious anemia which is not uncommon. It is quite possible that she has the two conditions together.

#### DISCUSSION.

DR. QUINTER O. GILBERT: There is one interesting thing in connection with this case and a great many other cases which terminate in the so-called pernicious anemia. That is the history of hemorrhage. A great many observers have written about the association of hemorrhage and pernicious anemia. There is another case in the ward now which apparently started from a severe nose bleed. We cannot rule out in this case the fact that the disease started by marked disturbance of the hematopoietic system, by a severe hemorrhage superimposed upon a secondary infection. Probably many cases occur with some condition causing a disturbance in the hematopoietic organs following by a secondary infection or metabolic disease which will throw a greater strain upon the depleted hematopoietic system, so that it cannot respond, and as a result, an anemia follows with the earmarks of pernicious anemia. This is illustrated by another case, which is in the ward now, with a definite familial history of syphilis and

lead anemia some years ago. He now has the characteristic picture of pernicious anemia.

The organism which we have isolated from this case is apparently a hemolytic coccus of some sort, a very slowly growing organism.

DR. ADALINE E. GURD: I have been much interested in the report of this case especially the findings of the examination of the blood. I cannot say that I believe the massing of the cases in that manner is going to lead us in the right direction. I have been accustomed to diagnose pernicious anemia after I have seen the pathologic specimens after death, and they are typical. In fifty per cent. of our cases we find that they have been cases which have not been pernicious anemia, cases in which there have been large hemorrhages, which I would call secondary anemia. In the past week we have had a case of sarcoma sent in to us as pernicious anemia. In pernicious anemia the pathologic picture is typical and definite. I believe the origin of pernicious anemia is going to be found through chemical and not pathologic work. The lesions which we find constantly in the cord are of such an extremely severe nature that one must assume that they are made by some extremely active chemical substance. There have been very extensive experiments made in Europe on the dysentery toxin and there has been a condition in the cord which is similar in the manner of destruction but not in position. The dysentery toxin destroys the cells of the anterior horns. In all these other conditions which are mixed with pernicious anemia, there is a reparative stage, but there is none in pernicious anemia. Therefore I regret to see any classifying of all sorts of cases as pernicious anemia.

DR. R. W. KRAFT: I would like to inquire as to the frequency with which a count of 3,000 leucocytes is met with in a streptococcus infection.

DR. CARL D. CAMP: I was under the impression that in syphilitic anemias there are certain characteristics of the blood picture which might differentiate it from the pernicious or primary anemias, such as hyperlymphocytosis. With relation to the neural conditions of pernicious anemia, I have at present under observation an interesting family in which there are two brothers and a sister. Both the brothers have a neural type of progressive muscular atrophy. The sister has pernicious anemia, the pernicious anemia having been diagnosed in the Medical Clinic by Dr. Dock.

DR. NEWBURGH: It certainly is true that there is a difference between these cases for which an etiology can be found and another group which may be called idiopathic pernicious anemia. The cases with etiology do not have the spontaneous recoveries so far as one can see. I have not been able to find a single example of, for instance, bothriocephalus latus pernicious anemia which has recovered spontaneously, and then has gone down again. That may be the essential difference. On the other hand, it is absolutely impossible to distinguish from the

clinical side between what we may call idiopathic anemia and this other group, so that from the purely clinical aspect, it is at least important to realize that all blood pictures which suggest idiopathic anemia are not primarily pernicious, that there are a certain proportion which are curable in a simple way. There are some cases where a definite cause can be found and when the cause is removed the anemia disappears. Whether there is any closer relation than that, it is impossible to say. Certainly the large proportion of so-called pernicious anemias go on eventually to death without any definite etiology. Perhaps we are wrong in assuming that we can find a cause of this sort for all cases.

As regards the question of leucocytosis in streptococcus infections, of course, leucocytosis is the usual finding. With this particular type of anemia we would not expect a leucocytosis. Presumably the lack of leucocytosis goes with the pernicious picture and has nothing to do with the infection, but is simply a part of the general blood picture.

## REPORT OF AN UNUSUAL CASE OF HYDRONEPHROSIS RESULTING IN A MEDULLARY CARCINOMA.

ROLLAN W. KRAFT, M.D.

(From the Genitourinary Clinic, University Hospital, Ann Arbor, Michigan).

The following case is of interest, principally from the standpoint of diagnosis and because it is the largest hydronephrotic kidney that has ever been removed in the University Hospital.

Mr. John S., aged 64, American, entered the University Hospital October 23, 1916, because of a large abdominal tumor.

The patient's father, mother and first wife died of carcinoma. One brother died of tuberculosis. There is no history of hemophilia.

In 1896, the patient was injured in the left side with a plow handle, breaking a rib. Following this a large tumor appeared in the left upper quadrant. The tumor was not painful and remained at about the same size until August, 1914. At this time, the tumor began to enlarge and in 1916 increased in size very rapidly. The patient began to have some pain at this time during movements of the bowels, especially after eating large meals and during attacks of enteritis.

Examination of the patient at this time shows a man, average sized frame, rather poorly nourished, with a dry skin. There is a moderate cyanosis about the face with dilatation of the



superficial capillaries. The axillary and inguinal glands are palpable, but the epitrochlears can not be felt. The pupils are symmetrical and react normally to light and to accommodation. Extraocular movements are normal. The sclera and conjunctiva are negative. The teeth are in poor condition. The tongue is clean, protrudes without deviation or tremor. The mucous membranes are negative. The thorax is broad, the anteroposterior diameter being increased. The ribs flare out in the left lower chest. Tactile fremitus is normal,

*Back.*—Moderate scoliosis. Left side is fuller than the right.

*Abdomen.*—There is a large cystic tumor in the left abdomen, which begins at the left hypochondrium on a level with the ribs. (Fig. 1). The tumor fills this inside of the abdomen extending a hand's breadth below the umbilicus, and to the right beyond the umbilicus. Just opposite the latter a distinct notch can be felt. On percussion the mass is dull. The colon was inflated and the area of dullness is decreased. The colon seems to cross the lower part of the tumor but is displaced to the inner side in the region of the splenic flexure. The tumor can be raised from behind during bimanual palpation. Heavy percussion causes pain in the costovertebral angle. The tumor moves slightly with respiration. There is no muscle spasm and very little abdominal tenderness. Deep pressure with sudden release causes pain.

*Reflexes.*—Are prompt and equal on both sides.

There is no edema. There is evidence of an old fracture in the left femur. Examination otherwise negative.

*Cystoscopic examination.*—Patient cystoscoped by Dr. Kraft. Bladder is negative, except for a slight trigonitis. The right ureteral opening is normal. Left ureteral opening is situated high on a papilla which has the appearance of a blackberry. The right ureter is easily catheterized, the left ureter, with difficulty. No urine is obtained from the left side. The right catheter drains in the usual manner. Phenol-sulphonaphthalein test on this kidney gives, first hour 25 per cent., second hour 26 per cent., total 51 per cent.

Thorium double acetate was injected into the catheters by the gravity method and the patient X-rayed.

X-ray report is as follows: "Upper plate is fairly satisfactory. The right kidney pelvis is not completely injected but appears normal in every respect. The left ureter rises to the level of the upper border of the fourth lumbar near the median line approaching it in a fairly broad curve. There is a double loop in the bladder. The upper end of the ureter is dilated and its termination is about three-quarters



Fig. 1. Case of closed hydronephrosis with large stone in ureter and pelvis. The wall of the cyst had undergone carcinomatous degeneration. (a) Tumor as outlined by inspection showing notch.

resonance is good, the breath sounds being somewhat emphysematous in type. There is dullness in the left lower chest as high as the sixth rib. The liver dullness begins at the fifth intercostal space. The patient has a slight seborrheic dermatitis.

*Heart.*—Apex impulse is felt and seen in the fourth intercostal space just inside the nipple line with no enlargement to the right. The aortic second is louder than the pulmonic second sound.

of an inch below and its course in the last inch about parallel to the lower border of the large shadow which we consider a stone in the pelvis of the kidney. This stone is approximately one and one-half inches in diameter and covers the left lateral portion of the third lumbar vertebra. The outline of the tumor mass is easily followed, smooth without bossae, has a perfect outline of the lower pole of an enormously enlarged kidney. Lower plate is negative.

"Diagnosis; hydronephrosis with calculus in the pelvis of the kidney."

The patient's stools were negative. The specific gravity of the urine was 1025, the reaction was acid and at one time there was a trace of albumin.

The blood picture showed 4,500,000 reds and a leucocyte count varying from 20,000 to 25,000 on different occasions. The hemoglobin was 75 per cent. The differential count showed the following:

Lymphocytes, small ..... 2.5 per cent.  
 Lymphocytes, large ..... 3.0 per cent.  
 Transitionals ..... 4.2 per cent.  
 Polymorphonuclears ..... 87.0 per cent.  
 Large mononuclears ..... 3.5 per cent.

The blood urea gave 0.0624 grams per 100 c. c. The diastolic blood pressure was 90, the systolic, 135. The Wassermann examination was negative.

A two stage operation was decided upon. An incision was made parallel to the twelfth rib and the peritoneum stripped from the tumor. The fatty capsule was very atrophic and all that remained of the kidney was a large cyst. A trocar was introduced into the cyst and two quarts of liquid were drained off. A stone was palpated in the pelvis of the kidney. A tube was stitched tightly into the sac by means of catgut and the wound closed in the usual manner. Fluid from the sac contained urea, uric acid, cholesterin and fatty acid crystals.

Two weeks later, the sac having been drained and the patient's general condition improved in the meantime, the incision was reopened. The old hydronephrotic sac, still containing considerable fluid, although greatly shrunken

CHART SHOWING SYMPTOMS AND SIGNS OF CYSTS OF THE ABDOMEN.

	Intury	Jaundice	Early Appearance	Pain	Movement on Respiration	X-ray	Urine	Indated Stomach	Inflated Colon	Blood	Stool
OVARIAN			From pelvis mid line	— Unless infected		+ or —	—	Above	Above	Negative	Negative
HYDATID		+ or —	Beneath liver	— Unless infected	+	+ or —	Albumin	Below and right	Below	Eosinophilia Sec. anemia	Negative
PANCREATIC	+ or —	+ or —	Median line above umbilicus	+		Helpful	Sometimes albumin	Above usually	Usually below	Negative	Fat not constant
OMENTAL	+		Nothing constant			Helpful	—	Above	Around tumor	Negative	Negative
KIDNEY		Very seldom	Either flank	+	+	Diagnostic	Albumin casts	Median and above	Over or median	Negative	Negative
SPLEEN	+		Splenic region	+ early	+	+ or —	—		Under	+	



in size, was carefully dissected from the surrounding structures and delivered. The pedicle was clamped, the vessels tied with catgut and the cyst removed. Tube and cigarette drains were placed in the cavity. Through and through silk-worm sutures were introduced and the usual layer sutures of catgut were inserted.

The appended chart gives the essentials in diagnosis of abdominal cysts.

The diameter of the sac at the time of the first X-ray was 12 inches and it contained over two quarts of fluid; in addition to the large stone there were several small ones.

The pathologic diagnosis was large old hydronephrosis with malignant degeneration, medullary carcinoma.

A careful history is very essential in the diagnosis of such conditions. On further questioning, this patient gave us the additional information that he had been injured by the caving in of a well and had been removed from the well by means of a horse attached to a rope which had been placed around his body. This terrible strain had been sufficient to render him unconscious for several hours and was followed by the passing of blood in the urine for several days. In 1879, patient passed 19 stones per urethram.

The determination of mobility should never be neglected. Hyatid and kidney cysts show some mobility on respiration in contrast to other cystic conditions. However, should any cyst be attached to movable organs or the abdominal wall, this diagnostic point may be rendered valueless. The differentiation of ovarian cysts from a hydronephrosis can always be made by cystoscopic and X-ray examination after injection of the kidney pelvis. Cysts tend to be displaced in the direction whence they came; a movable kidney tends to resume its normal position; a movable ovarian cyst tends to be displaced toward the pelvis. Pancreatic cysts may entirely disappear after inflation of the stomach and colon. In some cases, however, pancreatic cysts may appear above the stomach or below the transverse colon. The colon lies below tumors of the liver and spleen, with some exceptions. Omental cysts usually have a collar

of distended colon about them when the latter is inflated.

We wish to thank the X-ray Department for aid in making this diagnosis possible and the Medical Clinic for transferring this interesting case and for their co-operation.

The patient made an uninterrupted recovery.

#### DISCUSSION.

DR. IRA D. LOREE: The case is interesting on account of the long time this man was ailing. We don't know whether his trouble dates from the later 70's when he passed so many stones per urethram, or whether it came in the later 90's when he received the blow on the side.

These cases of hydronephrosis are divided into two classes, large and small. A pelvis that holds four or five ounces is a small, and over that a large hydronephrosis.

The two stage operation was employed because this patient was not in good condition and besides the relief of so much pressure had to be taken into consideration. I don't think Dr. Kraft is quite right when he says this is the largest hydronephrosis ever operated in this Clinic. There was one four or five years ago, relatively much larger, occurring in a seven year old boy.

DR. QUINTER O. GILBERT: I think the clinical signs upon palpation and examination of this patient should not be passed over without a little more comment. The patient was in the Medical Clinic for about a week and it is frankly admitted that we all made a mistake in diagnosis. We thought up to the time of the X-ray that it was a splenic tumor. It extended up under the ribs, had a rather sharp edge which curved on the right side approaching the umbilicus with a definite induration. It felt, indeed, like a splenic tumor. We were unable at that time to make out any cystic nature to it until after we had Dr. Van Zwaluwenburg's report. We then could feel a slight change in resistance in the lower portion. On physical examination I think it was practically impossible to diagnose this as a hydronephrosis, as the physical signs were predominantly in favor of a splenic tumor.

DR. KRAFT: I have nothing further to say except that we do get cases, in the literature at least, of enlarged spleen with calcareous infarcts which might possibly resemble this very closely with the X-ray. Dr. Van Zwaluwenburg suggested that this might possibly be a piece of barium remaining in the bowel lying in a notch of the spleen. Of course, with the cystoscopic examination and the inability to secure any urine from the left side, the diagnosis seemed certain even without the X-ray.

# The Mid-winter Session of the Council

of the

## Michigan State Medical Society

Held in Detroit, January 23 and 24, 1917  
at the Statler Hotel

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The Council convened for its regular mid-winter session at the Statler Hotel on January 23 and 24, 1917.

On the evening of January 23 President Biddle tendered a dinner to the Council and a few invited guests. Those present were:

President, A. P. Biddle; Chairman, W. T. Dodge; Councilors, A. E. Bulson, C. H. Baker, G. L. Kiefer, A. L. Seeley, A. H. Rockwell, F. C. Witter, B. H. McMullen, W. J. DuBois, S. K. Church, A. M. Hume; Treasurer, D. E. Welsh; Secretary-Editor, F. C. Warnshuis and Doctors Angus McLean, C. D. Aaron, F. B. Tibbals, B. D. Harrison, D. M. Campbell, H. S. Bartholomew, J. E. Frothingham, J. A. McMillan and J. V. White.

After participating in a most delightful dinner, President Biddle stated that he had invited a few of his friends to be present at this informal meeting to discuss some of the problems that confronted the medical profession of Michigan today and the solution of which merited our serious deliberation.

Chairman Dodge then called upon the following men: Angus McLean, J. A. MacMillan, President of the Wayne County Medical Society; Dr. Bartholomew, member of the State Board of Health; Dr. C. D. Aaron, speaking in behalf of the American Internist, and Dr. Don M. Campbell. These men during their remarks touched upon the following topics: "Fee Splitting," "The Doctor's Responsibility for the Acts of Nurses," "The American College of Physicians," "The Relation of the Profession and County Society to the Public," "The Activities of County Societies," "Medical Education in Michigan," "Relations to the Industrial Compensation Board," "Relations to State Board of Health and Tuberculosis Survey," "Obligation of the Internist to the Surgeon as Well as to the Public," "Group Practice of Medicine," "The Doctor's Responsibility to the Public" and similar subjects that deserve our

attention in order that we may maintain the esteem and confidence of the public of our state. These discussions were very pertinent and well put and revealed the fact that the discussers had given the subject upon which they spoke, considerable thought.

The Secretary-Editor then read his annual report.

Dr. F. B. Tibbals, Chairman of the Medico-Legal Committee, read his annual report.

Treasurer D. E. Welsh submitted his annual report.

The reports of these several officers were referred to the several committees of the Council and will be found under the official minutes of the Session of the Council on January 24th.

It was agreed that the evening had been a most profitable and enjoyable one and that the deliberations indulged in were prophetic of a new era and an awakening on the part of the profession of our state to achieve prestige and accomplishments in lines beyond the immediate boundary of scientific medicine and surgery.

A hearty vote of thanks was tendered to President Biddle for the evening's entertainment.

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THE REGULAR MID-WINTER SESSION OF THE  
COUNCIL OF THE

MICHIGAN STATE MEDICAL SOCIETY

WAS HELD AT THE  
STATLER HOTEL, DETROIT, JANUARY 24, 1917.

Chairman Dodge called the Council to order in the Library of the Statler Hotel at 9 a. m., the following councilors responding to roll call: Chairman Dodge; Councilors, A. E. Bulson, S. K. Church, A. L. Seeley, A. H. Rockwell, G. L. Kiefer, W. J. DuBois, C. H. Baker, B. H. McMullen, A. M. Hume, F. C. Witter; President, A. P. Biddle; Treasurer, D. E. Welsh; Secretary, F. C. Warnshuis. The ab-



sent councilors were C. T. Southworth, R. S. Buckland, W. J. Kay.

Councilor McMullen, Chairman of the Council's Committee on Finance, submitted the following report of the Treasurer and also the report of the Auditor as to the funds of the Society:

To the Council of the  
Michigan State Medical Society.

Gentlemen:

The following will convey to you the amount of funds of the Michigan State Medical Society in my hands for the year ending December 31, 1916:

23 Masonic Temple first Mortgage	
51½% Gold Bonds of \$100 each	\$2,300.00
1 Coupon Certificate of Deposit, Citizens State Bank, Big Rapids ..	1,000.00
2 Certificates of Deposit, Citizens State Bank, Big Rapids \$1,000 ea.	2,000.00
Total .....	\$5,300.00
Respectfully submitted,	
D. EMMETT WELSH, Treasurer.	

To the Council of the  
Michigan State Medical Society.

Gentlemen:

The following will convey to you the amount of funds on hand in the Defense Fund for the year ending Dec. 31st, 1916.

Certificate of Deposit Grandville State Bank No. 6524 .....	\$600.00
Certificate of Deposit Grandville State Bank No. 6526 .....	300.00
Certificate of Deposit Grandville State Bank No. 6527 .....	600.00
Certificate of Deposit Grandville State Bank No. 07462 .....	118.00
Total amt. in Certf. of Deposit	\$1,618.00
Balance in checking account, People's State Bank, Detroit, including interest .....	880.93

Grand Total .....\$2,498.93  
Respectfully submitted,  
D. EMMETT WELSH, Treasurer.

Jan. 18, 1917.

To the Council of the  
Michigan State Medical Society,  
Dr. F. C. Warnshuis, Secretary.

Gentlemen:

I have completed the examination of the books and accounts of the Michigan State Med-

ical Society for the year ended December 31, 1916 and I am pleased to submit the following exhibits:

#### EXHIBIT A.

Certificate of Deposit ..	\$2,500.00
Bond Account .....	2,300.00
G. R. Savings Bank ....	2,712.76
Accounts Receivable ....	715.84
Journal Expense .....	5,181.74
State Society Expense ..	2,118.49
Secretary's Expense ....	210.23
Council Expense .....	197.38
Reprint Expense .....	822.50
Membership Dues .....	\$2,489.35
Journal Subscriptions .....	2,564.42
Defense Fund .....	173.25
Advertising Sales .....	3,302.24
Reprint Sales .....	836.30
Outside Subscriptions .....	6.00
Interest Received .....	256.68
Present Worth .....	7,129.95
Sale of Extra Journals .....	.75

#### EXHIBIT B.

Statement of Revenue and Expenses for the  
year 1916.

##### REVENUE—

Membership Dues .....	\$2,489.35
Journal Subscriptions ..	2,564.42
Advertising Sales .....	3,302.24
Reprint Sales .....	386.30
Outside Subscriptions ...	6.00
Sale of Extra Journals ..	.75
Interest Received .....	256.68
	<hr/>
	\$9,455.74

##### EXPENSE—

Journal .....	\$5,181.74
State Society .....	2,118.49
Reprints .....	822.50
Council .....	197.38
Secretary .....	210.23
	<hr/>
	\$8,530.34

Net gain for the year 1916 ....\$ 925.40

#### EXHIBIT C.

Balance Sheet January 1, 1917.

##### ASSETS.

##### CURRENT—

Checking Account G. R.	
Savings Bank .....	\$2,712.76
Accounts Receivable ....	715.84

## INVESTMENTS—

(In custody of Treasurer).

Certificate of Deposit Acc. 2,500.00  
 Masonic T. Ass'n. Bonds 2,300.00  
 Total Assets .....\$8,228.60

## LIABILITIES.

## CURRENT—

Due Defense Fund .....\$ 173.25  
 .....\$8,055.35

## Present Worth.

Represented by Jan. 1,  
 1916 .....\$7,129.95  
 Net gain for 1916 ..... 925.40  
 .....\$8,055.35

The checking account of the Grand Rapids Savings Bank was reconciled as of December 31, 1916 and found correct.

The bonds and Certificates of Deposit are in the hands of the Treasurer, Dr. D. E. Welsh.

I am pleased to advise for your information that the books and accounts of the Michigan State Medical Society are in good condition and the above balance sheet, Exhibit C, in my opinion represents the true financial condition of the Michigan State Medical Society as of January 1, 1917.

The large balance of \$2,712.76 as shown on deposit in the Grand Rapids Savings Bank was occasioned by the maturity of Edwards and Chamberlain Hardware Company bonds and the funds were not reinvested until January 17, 1917, at which time was purchased two \$1,000 Citizens Telephone Company bonds bearing 5 per cent. interest payable June 1st, and December 1st each year. It is my opinion that this is a safe and desirable investment of the funds.

Thanking you for the work, and awaiting further opportunities to serve you, I am,

Yours very truly,

WALTER H. SHULTUS.

Certified Public Accountant.

My certificate is dated March 7, 1916.

My bond expires March 4, 1917.

## ANNUAL REPORT

SECRETARY-EDITOR MICHIGAN STATE MEDICAL  
 SOCIETY FOR THE YEAR 1916.

To the Chairman and the Council  
 Michigan State Medical Society.

As your executive officer I respectfully submit to you, and through you to our component

membership, my annual report and summary of the activities, status and financial condition of the Michigan State Medical Society and its official organ of publication—*The Journal*, for the year 1916. In addition thereto I am incorporating such comments and recommendations as the year's work has inspired.

## ACTIVITIES.

While it must be acknowledged that there does exist, in certain localities, a deplorable apathy, on the whole the year just closed has witnessed a maintenance of our past activities with certain pleasing evidences of increased achievements. The profession as a whole has not been dormant. The untiring, unceasing, time consuming efforts of many members and local officials, exhibited individually and collectively through the medium of their County Societies enables our State Society to maintain its prestige and influence at home and in our parent national organization. This work must be recognized and acknowledged for it is by reason of these member's loyalty, judgment, ability and devotion that we can record and point with pride to this report's summarization as to who and what we are and why our membership is a distinct asset.

The avowed objects of our medical society have been lived-up to during the past decade or two. We have achieved in a satisfactory measure that which was sought to be accomplished. Organized medicine in Michigan has advanced to that stage, whereby we need not expect any marked development. Members will be added to our list here and there but they will but compensate for the deaths and removals. Those who are without the organization's fold and not exhibiting a desire to become affiliated are self satisfied individuals who are mal-contented, those incapable of perceiving the value of membership or that class of doctors whose deportment prohibit their becoming members. Exceptions there probably are in this group of non-members but they are in the minority. With the present population of Michigan we cannot hope to have a membership of more than 2,500. Our numerical strength may therefore be assured as attained.

We have and are exerting our influence in the advancement of public health betterment, enactment of health laws, prevention of disease, education of the public, elevation of the standards of medical education, limitation of quackery and fraud, and those other directions calculated to vouchsafe to our communal neighbors the benefits resulting from these propa-



gandas. Besides participating in these benefits our members have been advancing in the special fields of scientific progress due to the mingling amongst themselves in local, state and national meetings. They have thus been enabled to remain abreast of the times. By means of *The Journal* they are provided with an organ for the intercommunication of ideas, observations, experiences and information as to their goings and comings.

Six years ago our scope was broadened when the provisions were made for the protection of our members when sued or threatened by suits for mal-practice. The wisdom as well as the benefits derived from that addition to the benefits of membership have been satisfactorily demonstrated. It is today a valuable feature.

For sometime we have felt that it would be desirable to enlarge upon our present scope. We were convinced of this but the problem was, in what direction, what feature, how? In our goings and comings we have striven to find the proper avenue. We have pondered seriously and often upon the subject and lastly have reached the conclusion that the avenue must be along the line of benefit to the individual member. Last August we suggested to the Council and that body in turn recommended that the House of Delegates appoint a Committee charged to investigate and report upon the advisability of our State Society adopting and conducting a feature of Health and Accident Insurance for our members at a rate much reduced from that that is now being charged by insurance corporations. The Committee was appointed and is now busily engaged in securing and compiling data and will report at our next annual meeting.

Recently, while on board a train, during conversation we learned of the group plan of life insurance. Investigation of that feature was immediately instituted with the result that the following proposition was secured. It is advanced for our members' consideration.

January 14, 1917.

Dr. F. C. Warnshuis, Secretary,  
Michigan State Medical Society,  
Grand Rapids, Mich.

Dear Sir:

Permit me to ask that you present to the State Medical Society a few data for their consideration concerning insurance coverage, on the lives of each and all of their members.

I will not go into any details, or exploit the benefits and advantages of a proposition of this kind, but will give you the essential data from

which you can easily draw your own inferences, as to what it will do for your Society, and its individual members.

Superior Group Insurance as issued by the Aetna Life Insurance Company provides

(1) Insurance without medical examinations.

(2) For the introduction of new members, or a discontinuance of existing members by the simplest and most convenient method. A refund of unearned premiums for the then current policy year to any member surrendering his insurance.

(3) Insurance on new members at the same scale and rate basis and age, similar to original members.

(4) This insurance may be written with any beneficiary named by each applicant or individual member. Beneficiary may be changed by any individual member from time to time.

(5) Premiums may be payable annually, semi-annually, quarterly or monthly. The annual deposit is somewhat less than any of the others.

(6) Insurance on any or all individuals may be uniform or may vary as to the amount of insurance but insurance will not be written on any one member for life, in excess of two and one-half times the average, without medical examination.

(7) The policy will provide for indemnity in event of total and permanent disability.

The writer has been instrumental in placing much of this class of insurance in large groups; and it is easily recognized in many instances, applicants of the group, are thus favored with the best of insurance, who otherwise or because of medical selection might be considered uninsurable.

The insurance may be written on: (A) Yearly term rate. (B) Level premium life rate. In case of (A) the former increases a few cents per thousand each year. In the case of (B) the level premium life rate remains fixed throughout life. But in either case, the rate will be exceptionally low: far lower than any individual applicant can procure insurance of any good company.

If in your judgment either the Kent County or the State Medical Society would be interested, I would be glad to give further information to any committee appointed for that purpose.

Very respectfully yours,

(Signed) N. E. DEGEN, Manager.

RECAPITULATION.

- 1. A low rate for additional life insurance for each member by a reliable old-line company.
- 2. No physical examination requirement.
- 3. A fixed yearly assessment.
- 4. No extra assessments.
- 5. Does not terminate as long as yearly premiums are paid.
- 6. Increasing value of membership in our State Society.
- 7. Inducements to those who are not affiliated to become members.
- 8. The providing of additional protection for your family when your death occurs.

*The question is—do our members care to avail themselves of this benefit. Do you want your State Society to undertake and accomplish the providing of this feature?*

This matter is referred to the Council at this time in order that proper investigation may be made and the whole matter presented at the next meeting of the House of Delegates. Your Secretary asks authority to compile this data for such presentation at our Annual Meeting.

ANNUAL MEETING.

The Houghton meeting, while small in attendance has gone on record as a profitable one to the members attending. Further, that meeting served materially to cement more firmly the fraternal bonds of fellowship and unity between the members of the Upper and Lower Peninsulas of our state and for that reason was of additional value to our Society.

We remind the Council that the House of Delegates referred the selection of a place for holding our 1917 meeting to you for final action. The invitations of Bay City and Battle Creek are herewith presented for your consideration.

The holding of the first meeting of the House of Delegates on the evening previous to the first general session proved to be a satisfactory arrangement and it is recommended that this plan be adopted for the coming session.

MEMBERSHIP MICHIGAN STATE MEDICAL SOCIETY.

	Paid Mem.	Unpaid	Total Mem.
Antrim, Emmet,			
Charlevoix .....	27	8	35
Alpena .....	17	5	22
Barry .....	2	3	5
Bay .....	56	7	63
Benzie .....	6	0	6
Berrien .....	27	10	37

Branch .....	11	6	17
Calhoun .....	101	5	106
Cass .....	6	6	12
Cheboygan .....	5	3	8
Chippewa .....	21	8	29
Clinton .....	25	3	28
Delta .....	22	4	26
Dickinson-Iron .....	11	6	17
Eaton .....	34	8	42
Genesee .....	78	4	82
Gogebic .....	9	9	18
Grand Traverse .....	27	2	29
Gratiot-Isabella-Clare ..	40	10	50
Hillsdale .....	16	10	26
Houghton .....	52	6	58
Huron .....	17	7	24
Ionia .....	18	9	27
Ingham .....	64	15	79
Jackson .....	45	8	53
Kalamazoo .....	138	13	151
Kent .....	158	17	175
Lapeer .....	27	1	28
Lenawee .....	31	12	43
Livingston .....	8	7	15
Macomb .....	26	6	32
Manistee .....	12	3	15
Marquette-Alger .....	39	3	42
Mason .....	8	1	9
Mecosta .....	18	1	19
Menominee .....	15	4	19
Midland .....	7	0	7
Monroe .....	22	2	24
Montcalm .....	27	4	31
Muskegon-Oceana .....	38	2	40
Newaygo .....	8	2	10
Oakland .....	47	6	53
O. M. C. O. R. O. ....	16	2	18
Ontonagon .....	8	1	9
Osceola-Lake .....	6	3	9
Ottawa .....	22	13	35
Presque Isle .....	3	2	5
Saginaw .....	44	27	71
Sanilac .....	14	6	20
Schoolcraft .....	7	2	9
Shiawassee .....	26	8	34
St. Clair .....	52	4	56
St. Joseph .....	14	7	21
Tri .....	23	4	27
Tuscola .....	31	9	40
Washtenaw .....	72	16	88
Wayne .....	782	91	873
	2,486	451	2,937

The foregoing figures reveal our paid membership on December 31, 1916 as 2,486 with 451 members lapsed, deceased or removed. As individual physicians and also collectively



we have one great foe—apathy. To overcome that condition is our greatest problem. In fairness we are compelled to report the following Societies as existing practically in name only: Barry, Cass, Dickinson-Iron, Lenawee, Livingston, Mason, Newaygo, Osceola-Lake, Presque Isle, Schoolcraft. True, geographical location in some of them produce a valid reason for lack of society work, while in the remainder the affliction is created by the apathy of the profession.

We do especially urge that the Council devise some course of action that will arouse renewed enthusiasm in those dormant organizations. It is recommended that a meeting be arranged by your Secretary and that at such a meeting our President and two or three Council members attend to bale-out these stranded units and start them aright upon an active course of society work.

Our profession has never exacted such devotion from its votaries as it does today. Astonishing progress is taking place in every department of medicine and only by incessant vigilance and zeal can the conscientious practitioner hope to keep his daily practice abreast of the latest advances of science. By maintaining our membership the danger of mental progeria is lessened. It is incumbent upon the Council and State officials to become aggressively active in such a propaganda. The burden also rests upon the entire profession of Michigan and theirs is the duty to co-operatively achieve organized strength.

In frank, constructive criticism we must acknowledge that the spirit of "Let George do it" has been rather epidemic in some parts. To counteract that condition it is recommended that the Council's Committee on County Societies canvass the conditions in these dormant Counties and instruct your Secretary as to the proper course to pursue.

While the foregoing has imparted a pessimistic viewpoint it must not be concluded that the same condition is prevalent throughout the state. The remaining units are active, aggressive and their meetings are inspiring. They are indeed live units that enable the state society to maintain its position in the front rank of state organizations.

During the year we have visited, as invited, the following societies: Calhoun, Berrien, Lapeer, Ottawa, Kalamazoo, Muskegon-Oceana, Shiawassee. We hold ourselves ready to respond whenever the invitation is extended.

It is recommended that funds be appropriated to pay the railroad fare of the members of

the Committee on Scientific Work to attend a meeting of that Committee during the month of March. Such a meeting to be held at the place selected for the holding of our next annual meeting. It is believed that this Committee will then be enabled to prepare a scientific program of greater value that will induce a larger attendance at our annual meeting.

The problem of Social Insurance is an important one that behooves our profession's closest consideration and alertness. In order that this subject may be informatively discussed it is recommended that the Council instruct its Scientific Committee to prepare a symposium upon this subject for our Annual Meeting. Further that if it is deemed prudent and necessary this Committee may incur the traveling expenses of two outside speakers, who are acknowledged as capable of speaking authoritatively upon the subject by reason of their personal investigations and study. The need presents that our members be afforded the opportunity of familiarizing themselves with this pending important legislation.

#### THE JOURNAL.

The *Journal* has created its own standard and value. It rests with the members individually to pronounce its value. During the year, upon different occasions, we have invited suggestions and criticisms, but none were presented to your editor.

We have sought to cause it to serve the needs of our members and to enlighten them upon the advancements that are being accomplished. While a contemporary has commented that we were perched on a high scientific pedestal we have been contented to accept this as a compliment and not a criticism as intended. While the contributions of some members have been rejected we have played no favorites. The policy pursued has been to publish articles of inherent educational value. That policy we assume to be the only one that will maintain for our publication a reputation such as is to be desired.

True, some of our members have deemed it wise to submit their writings to other publications, ignoring their own organ. We deplore this lack of co-operation and cordially invite them to remain loyal to *The Journal*.

Our advertising income was \$3,302.24 a decrease of \$525.42 over 1915. Considering the attitude of business firms to class advertising we are indeed fortunate in securing this patronage. Our readers must patronize these advertisers if we hope to continue to receive this

income to pay the cost of publication. The net income of *The Journal* was \$6,709.71 and the net cost \$6,004.24, thereby creating a profit of \$705.47. Our foresight in purchasing a year's supply of paper last August accomplished a material saving of over \$800.00. In comparison two years ago, just before the war, the cost of the paper used was \$1,900.00. Today were we to go out into the open market to purchase that same amount of paper, we would pay \$3,200.00. This saving of \$1,300 was accomplished by our printer's foresight that enabled us to secure abundant stock before the market increase.

## FINANCIAL STATEMENT.

We submit here the Certified Accountant's exhibit that reveals our present worth, income, disbursements and resources:

## JOURNAL EXPENSE, 1916.

## JANUARY—

G. R. Typewriting Co. ....	\$ 5.64
Postmaster .....	10.51
Decker & Jean, (Ind. Ins.) .....	5.00
West's Drug Store, Dec., Jan. Rent .....	15.00
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00
Tradesman Co., Journal .....	330.17
Tradesman Co., Engravings .....	56.75

\$ 523.07

## FEBRUARY—

Tradesman Co., Journal .....	\$272.61
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00
West's Drug Store, Rent .....	7.50
Barlow Bros., Binding Jour., 1915 .....	14.00
Postmaster .....	9.39

\$ 403.50

## MARCH—

West's Drug Store, Postage .....	\$ 5.00
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00

\$ 105.00

## APRIL—

Tradesman Co., Mar. and Apr. Jrs. ....	\$610.09
West's Drug Store, Postage .....	12.50
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00

\$ 722.59

## MAY—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
A. Griffen, Clipping Service .....	17.50
G. R. Typewriting Co. ....	5.29
Newspaper Eng. Co. ....	17.37
Tradesman Co. ....	304.63
West's Drug Store, Rent .....	15.00
Postmaster .....	21.72

\$ 481.51

## JUNE—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
Tradesman Co. ....	312.44
Postmaster .....	10.40
West's Drug Store, Rent .....	7.50

\$ 430.34

## JULY—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
Postmaster .....	8.05
20th Century Press C. B. ....	4.68
West's Drug Store, Rent .....	15.00
Tradesman Co. ....	257.18

\$384.91

## AUGUST—

Newspaper Eng. Co. ....	\$ 16.15
20th Century Press C. B. ....	3.50
Postmaster .....	9.59
G. R. Typewriting Co. ....	3.35
Tradesman Co. ....	288.49
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00

\$ 421.08

## SEPTEMBER—

Tradesman Company .....	\$314.03
Postmaster .....	9.79
20th Century Press C. B. ....	3.50
Addresso Repairs .....	.40
West's Drug Store, Rent .....	7.50
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00

\$ 435.22

## OCTOBER—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
Postmaster .....	8.29
G. R. Typewriting Co. ....	.63
Tradesman Co. ....	253.04

\$ 361.96

## NOVEMBER—

Tradesman Company .....	\$357.09
20th Century Press C. B. ....	3.50
Postmaster .....	9.06
Powers Theatre Bldg., Rent Oct. and Nov. ....	20.00
Dr. F. C. Warnshuis, Nov., Dec. ....	150.00
Miss Pinckney, Nov. and Dec. ....	50.00

\$ 589.65

## DECEMBER—

Tradesman Co. ....	\$ 310.70
Postmaster .....	8.71
20th Century Press C. B. ....	3.50

\$ 322.91

\$5,181.74



SOCIETY EXPENSE, 1916.

JANUARY—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
Dr. D. E. Welsh, Treas. Hon. ....	100.00
Powers-Tyson Ptg. Co., Member- ship Certificates .....	13.50
Decker & Jean, Ind. Ins. ....	5.00
Postage .....	58.50
West's Drug Store, Rent .....	15.00
	<hr/>
	\$ 292.00

FEBRUARY—

A. F. Crabb, Flowers McMullen ..	\$ 10.29
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00
West's Drug Store, Rent .....	7.50
	<hr/>
	\$ 117.79

MARCH—

West's Drug Store, Postage .....	\$ 5.00
West's Drug Store, Rent .....	15.00
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00
Bixby Office Supply Co. ....	3.05
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	\$ 123.05

APRIL—

West's Drug Store, Postage .....	\$ 12.50
Macey Co., Safe and Files .....	221.65
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00
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	\$ 334.15

MAY—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
Powers-Tyson Ptg. Co., Envelopes	8.55
A.M.A. Directory .....	8.00
Bixby Office Supply Co. ....	5.50
J. A. Thompson, Typew. Ribbon..	1.50
West's Drug Store, Rent .....	15.00
West's Drug Store, Postage .....	15.00
	<hr/>
	\$ 153.55

JUNE—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
West's Drug Store, Rent .....	7.50
West's Drug Store, Postage .....	5.00
B. D. Coats Co. ....	3.88
	<hr/>
	\$ 116.38

JULY—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
Postage, T. B. Blanks .....	10.64
Expense A.M.A. Meeting .....	40.35
Bixby Office Supply Co. ....	3.30
J. S. Crosby Co., Ins. ....	13.50
West's Drug Store, Rent .....	15.00
	<hr/>
	\$ 182.79

AUGUST—

Powers-Tyson Ptg. Co., Envelopes	\$ 5.60
A. F. Crabb, Flowers Dr. Dodge	10.36
Tradesman Co., T. B. Blanks ....	16.85
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00
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	\$ 132.81

SEPTEMBER—

Tradesman Co., Programs .....	\$ 44.00
Powers-Tyson Co., Stationery ....	56.73
J. A. Thompson, Typew. Ribbons	.75
Bixby Office Supply Co. ....	10.49
West's Drug Store, Rent .....	7.50
Dr. F. C. Warnshuis, Salary .....	75.00
Miss Pinckney, Salary .....	25.00
West's Drug Store, Postage .....	10.00
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	\$ 229.47

OCTOBER—

Dr. F. C. Warnshuis, Salary .....	\$ 75.00
Miss Pinckney, Salary .....	25.00
West's Drug Store, Postage .....	5.00
Powers-Tyson Ptg. Co., Removal Notice Cards M.S.M.S. ....	2.25
20th Century Press C. B. ....	3.50
Forbes Rubber Stamp Co. ....	.45
Macey Co., Book Case .....	27.75
Postmaster .....	10.00
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	\$ 148.95

NOVEMBER—

Powers-Tyson Printing Co., 1917 Certificates .....	\$ 15.25
Bixby Office Supply Co. ....	2.30
Powers Theatre Bldg., Rent Oct. and Nov. ....	20.00
Dr. F. C. Warnshuis, Nov., Dec.	150.00
Miss Pinckney, Nov. and Dec....	50.00
	<hr/>
	\$ 237.55

DECEMBER—

Fox Typewriter Co. ....	\$ 35.00
Postage .....	5.00
Postmaster, Postage .....	10.00
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	\$ 50.00
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	\$2,118.49

COUNCIL EXPENSE, 1916.

DETROIT—

W. J. DuBois, M. D. ....	\$ 27.10
F. C. Warnshuis, M.D. ....	23.15
Miss Pinckney .....	10.03
Hotel Statler .....	11.50
S. K. Church, M.D. ....	10.60
W. H. Shultus .....	24.00
F. C. Witter, M.D., Petoskey and Detroit .....	41.00
Hotel Statler, (Adv. Contract) ....	50.00
	<hr/>
	\$ 197.38

## SECRETARY'S EXPENSE, 1916.

Two Registration Girls, Annual Meeting .....	\$ 12.00
Trip to Lapeer Medical Society ..	8.00
Dr. F. C. Warnshuis, Exp. Hotel, Express, Stenographer, Annual Meeting .....	111.47
Reporting Annual Meeting .....	23.50
H. W. Loeb, M.D., St. Louis, Guest at Houghton Meeting ..	55.26
	<hr/>
	\$ 210.23

During the month of October a Questionnaire was sent to the various state secretaries to secure information as to the direction along which sister state organizations were expending their efforts. It was our purpose to ascertain whether other states were accomplishing more and creating greater benefits for their members.

The answers received were published in the editorial pages of the January, 1917 *Journal*. A careful perusal of these answers must convincingly cause our state organization to feel that we are abreast of the times in organizational activities. Should the suggested insurance features be adopted we will become pace-makers for other similar organizations. We are warranted in declaring that membership in our society is a distinct asset to the individual physician.

During the year we have received many inquiries from our members. In every instance the query has been promptly answered, the information sought supplied or the avenue for securing that which was desired opened. In one instance we believe we were instrumental materially in settling a business deal and secured a refund for the doctor. It has always been our desire to cause our office to be of assistance to every member in matters even without the pale of medicine. We again reiterate our willingness to be of assistance and ready to be of service to the profession of Michigan.

Lastly we express our appreciation of the confidence imposed and convey our thanks for the expressed trust that has been vested in your Secretary-Editor.

F. C. WARNSHUIS. Secretary-Editor.

To the Council.

Michigan State Medical Society.

Gentlemen:

The Medico-Legal Committee beg to report that 1916 was a very busy year. We defended ten cases at trial, and expended for legal expenses about \$3,100. This includes the annual retainers paid our general attorneys and about \$200.00 spent in preparation of cases not yet tried. Of these we lost one, a fracture case, in which a physician testified that it was always the duty of a doctor to "set a fracture straight and to keep it so," and this testimony took the case to the jury with adverse verdict.

The county in which this case arose is at present the black spot in Michigan from our standpoint, because the physicians of that county have not yet learned that adverse testimony in malpractice suits leads but to more malpractice suits. In proof of the truth of this statement we need only cite the fact that two other cases are awaiting trial there, fracture cases also.

In the seven years of our work 176 cases of alleged civil malpractice have been reported to this Committee, a pretty uniform yearly average of one threat or suit to every 100 members of the State Society. About 20 to 25 per cent. of these threats reach trial. Our experience demonstrates very clearly that the efficiency of our defense, or of any defense, bears a very direct relationship to the unanimity of the local profession.

The defendant is always somewhat at the mercy of any unprincipled or irregular or perhaps, antagonistic doctor, whose testimony may criticize his handling of the case just enough to make a question of fact for the jury. Without adverse professional testimony no case would reach the jury. When this adverse medical testimony comes from a local doctor, likely a member of the County Society, it has much more weight than when the medical expert is imported for the occasion. In many counties local opinion has been so strongly in favor of the defendant that no medical witness could be secured for the plaintiff without importing one, and in those counties winning of suits is com-



paratively easy. On the other hand wherever men, often of prominence, are willing to criticize another doctor from the witness stand, winning of malpractice suits is almost an impossibility.

We again urge the individual members of the profession to take this matter to heart, and weigh carefully their duty to the public, to themselves, and to their profession. If this be done no other conclusion can, we believe, be reached, except that one's first duty is to protect himself and his profession from the constant menace of malpractice charges.

When all the members of each County Society agree on this point no doctor will testify against another and these unjust charges will seldom reach trial because without a complacent medical witness few attorneys will go further than a threatening letter.

Respectfully submitted,

F. B. TIBBALS.

CHARLES W. HITCHCOCK.

ANGUS McLEAN.

The Finance Committee reported that they found these reports in very satisfactory condition and that they had no recommendations to make.

On motion of Councilor DuBois, supported by Councilor Church, the report of the Finance Committee was accepted and adopted.

Chairman Hume of the Council's Committee on Publication, reported that his committee had no report to make inasmuch as the work of the committee was covered by the annual report of the editor.

Chairman Bulson of the Council's Committee on County Societies presented the following report of the Medico-Legal Committee.

To the Council of the  
Michigan State Medical Society.

Gentlemen:

We commend the lucid reports of our Secretary and Treasurer. In reference to the conditions of mental progeria which exist in many counties of the state, we would recommend that the Secretary of the State Medical Society and

President, together with Councilor or Councilors of said district, arrange for a meeting in the more populous counties where the Societies are moribund and endeavor to arouse enthusiasm in Medical Organization and as individual physicians and also collectively, we urge an increased endeavor to bring into our organization all eligible and at present, unaffiliated physicians.

In the problems of Social Insurance we endorse the recommendation of the Secretary-Editor in that we recommend that the Council instruct its Scientific Committees to prepare a symposium upon this subject for our next annual meeting and that if deemed necessary this Committee pay the expenses of two outside speakers who are acknowledged as capable of speaking authoritatively upon the subject by reasons of their personal investigation, that the membership be afforded an opportunity of familiarizing themselves upon this important subject.

We would recommend that we accept the invitation from Battle Creek for the next annual meeting; the date to be decided by the Council.

We approve of the recommendation of the Secretary that the House of Delegates hold their first session on the evening previous to the general session of the Society.

With reference to Group Insurance as mentioned in the Secretary's report, we do not think it feasible or advisable to recommend superior group insurance as suggested by the Manager of the Aetna Life Insurance Co.

We again commend the report of the Chairman of the Medico-Legal Committee in the able manner in which the work of the Committee has been handled and recommend that their report be adopted.

Furthermore with reference to Dr. Ellis Kellog of Temperance, Monroe County, in defense of which we would recommend to the good judgment of the Medico-Legal Committee, as a Committee we do not regard cases of this kind as coming under the province of defense by our Society.

Respectfully submitted,

A. E. BULSON.

S. K. CHURCH.

A. H. ROCKWELL.

The following comments were submitted:

It was moved by Councilor DuBois, supported by Councilor Rockwell, that the Committee report referring to Group Insurance be eliminated. Carried.

It was moved by Councilor DuBois, supported by Councilor Rockwell that the report of the Committee as amended be adopted. Carried.

It was moved by Councilor Hume, supported by Councilor Bulson, that the request of the Secretary to investigate the features of Group Insurance and to present such a report at the next meeting of the Council, be granted and the Secretary authorized to enter into such an investigation. Carried.

It was moved by Councilor Church supported by Councilor Hume that the Fifty-second Annual Meeting of the State Society be held in Battle Creek on Sept. 5, 6 and 7. Carried.

Chairman Hume of the Legislative Committee of the State Society presented a resume of the legislative status in so far as it pertains to medical and health affairs in the present session of our legislature. He also suggested that it would be advisable for a Committee to be appointed to confer with the Industrial Compensation Board in order that matters affecting the profession may be discussed and an understanding reached as to the attitude of the Board in regard to the work of physicians in Industrial Accident cases. This verbal report was accepted and placed on file.

It was moved by Councilor DuBois, supported by Councilor Bulson that a committee be appointed by the Council to confer with the State Industrial Compensation Board. Carried.

The Chair appointed as such Committee: W. J. DuBois, A. M. Hume, F. C. Warnshuis.

President Biddle requested the Council to express their opinion as to the scope that his presidential address at our Fifty-second Annual Meeting should cover. He suggested that in view of the many pertinent problems before the profession that largely affect the public at large that it might be advisable for the President to address the public at an open meeting on the evening of the first day of our annual meeting.

It was moved by Councilor DuBois, supported by Councilor Baker that President Biddle be requested to render such an address before an open meeting on the first night of our annual meeting and that the public of Battle Creek and vicinity be invited to attend this meeting. Carried.

President Biddle presented a request from the Chairman of the Council's Committee on Civic and Industrial Relations asking for authority to incur the expenses of Dr. Rubinow of New York City to confer with that Committee. Upon motion of Councilor Baker, supported by Councilor DuBois, the request was granted.

President Biddle requested the Council to instruct the Secretary to send a telegram to Senators Wm. Alden Smith and W. E. Townsend urging them to approve and endorse the appointment by President Wilson of Surgeon General Braistead and Surgeon Grayson as rear admirals.

President Biddle remarked that a surgeon who controls the physical destiny of a President of 100,000,000 people was charged with a grave responsibility, that the manner in which he had acquitted himself in this respect is worthy of the promotion as rear admiral and that the services that had been rendered to this country by Surgeon General Braistead were so meritorious as to demand this promotion.

President Biddle urged the Council to exercise its influence to secure the confirmation of these nominations by President Wilson.

It was moved by Councilor Seeley supported by Councilor McMullen that the Secretary be instructed to send this telegram. Carried.

The following telegrams were then dispatched by the Secretary:

"Senator Wm. Alden Smith,  
Senator W. E. Townsend,  
Washington, D. C.

The Council of the Michigan State Medical Society in regular meeting assembled respectfully request and urge that the Senate approve the appointment by President Wilson of Surgeons Braistead and Grayson as Rear Admirals. We recognize the grave responsibility that rests



upon Surgeon Grayson intrusted with the health of our President and also are appreciative of the services rendered by Surgeon Braistead to his country and deem it but proper that their devotion to the trusts imposed should receive suitable recognition by our government.

Dr. F. C. Warnshuis, Secretary."

Councilor Hume reported upon the matter of District Health Officer's bill and outlined the proposed plan of the State Board of Health and requested instructions as to how his Committee should proceed.

It was moved by Councilor DuBois, supported by Councilor Rockwell, that the Legislative Committee be authorized to support this bill that was being fathered by the State Board of Health.

President Biddle then discussed the progress that was being made in the movement to secure an amalgamation of the University of Michigan and the Detroit College of Medicine and Surgery. President Biddle urged that the Council present a communication to the Regents of the University of Michigan and to the Trustees of the Detroit College of Medicine and Surgery requesting in the name of the profession of the State that aggressive action be taken to bring about an early and speedy consummation of this desired amalgamation.

It was moved by Councilor Kiefer, supported by Councilor Seeley, that Secretary be instructed to send such communications to the officials of these two schools and that it was the consensus of opinion of the members of the Council that clinical teaching at the University of Michigan should be done, in so far as possible,

and that we endorse and urge that these two schools get together to form one large and valuable medical educational institution in Michigan.

This motion was unanimously carried.

Upon motion of Councilor DuBois supported by Councilor Baker, Dr. Warnshuis was nominated as Secretary-Editor for the ensuing year, at the present salary.

There being no other nominations it was moved that the nominations be closed and that the Chairman of the Council cast the ballot for Dr. Warnshuis.

The Chairman declared Dr. Warnshuis elected as Secretary-Editor for the ensuing year.

Upon motion of Councilor Baker, supported by Councilor McMullen, Dr. D. Emmett Welsh was nominated as Treasurer.

There being no further nominations the Chairman cast the ballot of the Council for Dr. Welsh and declared him elected as **Treasurer** for the ensuing year.

Upon motion of Councilor DuBois, supported by Councilor Kiefer, an honorarium of \$100.00 was voted to the Treasurer. Carried.

Upon motion of Councilor Church, supported by Councilor Seeley, Dr. C. B. Stockwell whose term expires on the Medico-Legal Committee, was elected to succeed himself.

There being no further business to come before the Council it was moved by Councilor DuBois, supported by Councilor Bulson, that the meeting adjourn.

W. T. DODGE, Chairman.

F. C. WARNSHUIS, Secretary.

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*Dakin's Hypochlorite Solution.*—The following procedure is claimed to have superceded the previously published formulas: Stir 200 Gm. chlorinated lime into 5000 Cc. ordinary water and let stand over night. Dissolve 100 Gm. anhydrous sodium carbonate and 80 Gm. sodium bicarbonate in 5000 Cc. cold water and pour this into the chlorinated lime mixture, and shake for one minute. After one hour siphon off the clear liquid and filter it through paper. A portion of this must not become red if a little dry phenolphthalein is added to it (*Jour. A.M.A.*, Dec. 2, 1916, p. 1687).

*Arsenobenzol (Philadelphia Polyclinic).*—Dr. Schamberg explains that the Dermatologic Laboratory of the Philadelphia Polyclinic availed itself of the opportunity to supply their produce when salvarsan was not obtainable. Having so served this purpose in the interest of humanity and the public health, the marketing of their product was discontinued when the German product became again available. The laboratory is not established for commercial purposes and could not afford to become embroiled in patent litigation which would no doubt be instituted by the owners of the salvarsan patent (*Jour. A.M.A.*, Dec. 9, 1916, p. 1776).

**The Journal**  
OF THE  
**Michigan State Medical Society**  
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman .....Owosso  
Guy L. Kiefer .....Detroit  
W. J. Kay .....Lapeer  
W. J. DuBois .....Grand Rapids

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Grand Rapids, Mich.

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March.

*Editorials*

To President and Secretary  
County Medical Societies.

Dear Doctor:

Have you missed the reports of your county meetings in *The Journal*? If so, they have not been published because the Editor has failed to receive them from the County Secretary.

We urgently request that your Society arrange for the sending of these reports to *The Journal*.

A. E. BULSON, Chairman.  
Council's Committee on County Societies.

DANGER OF FLY POISONS.

In October, 1914 and February, 1916, we published a cursory statistical report that revealed the number of cases where children had been poisoned from arsenical fly destroyers. We again present a table showing cases reported in the press and collected through the agency of a press clipping bureau this last year.

1916	Total	Fatal	Recov. Doubt.	Recov. Indic.
March .....	1		1	
June .....	1			1
July .....	11	5	1	5
August ....	16	3	1	12
September ..	3	2		1
October ....	4	2		2
	36	12	3	21

The case occurred in the following states:

California .....	1	
Illinois .....	9	3 fatal
Indiana .....	1	
Iowa .....	3	
Michigan .....	1	
Minnesota .....	5	2 fatal
Montana .....	1	1 fatal
Missouri .....	2	1 fatal
N. Dakota .....	2	2 fatal
Nebraska .....	3	1 fatal
Pennsylvania .....	4	1 fatal
So. Dakota .....	1	
Vermont .....	1	
Wisconsin .....	2	1 fatal

It is interesting to note that nine of these cases with three fatalities occurred in Illinois and only one case in Michigan. A bill introduced in the Illinois legislature to prohibit the sale of poisonous fly-papers was *defeated*. A similar bill was *passed* by the Michigan Legislature. Illinois paid as tribute for the neglect of her legislators to safe-guard children, three infant lives and the suffering of six others. This example is a forceful one, in our opinion, and is self pleading for the abolition of this peril.

The United States Public Health Service has taken cognizance of the dangers of poisonous fly papers. The following is extracted from supplement No. 29 of the Public Health Reports:

“Of other fly poisons mention should be made merely for the purpose of condemnation, of those composed of arsenic. Fatal cases of the poisoning of children through the use of such compounds are far too frequent, and owing to the resemblance of arsenical poisoning to summer diarrhea and cholera infantum, it is believed that the cases reported do not by any means comprise the total. Arsenical fly-destroying devices must therefore be rated as extremely dangerous and should never be used, even if other measures are not at hand.”

There seems to be no sufficient reason for permitting the unrestricted sale of arsenical fly destroyers and it would be well if other states followed the lead of Michigan in this and regulated their sale. On request we will be pleased to send to anyone interested a copy of the Michigan law.

The profession must need actively to exercise its educational influence to abolish this evil.



# Group Plan Life Insurance

## A Proposed New Feature for Our State Society

Our members are urged to read that part of the Secretary's Annual Report, published in this issue, dealing with Group Life Insurance for our members. The Council has authorized your Secretary to secure the necessary data and present a report to the next session of the House of Delegates. The suggestion contained in the Annual Report is lucidly outlined—the plan in brief is to cause to be available to our members life insurance to the amount of \$1,000 to \$3,000 at an annual rate of from \$6.66 to \$46.13 per \$1,000, between the ages of 35 and 65 years, **without** physical examination. The policy also to contain a total permanent disability feature.

This proposed plan will make it possible for members who have been rejected because of physical defects to secure a \$3,000 policy at rates **lower** than those quoted to single individuals. It will permit others to obtain additional insurance at **greatly reduced rates**. It makes it possible for those of limited financial means to secure added protection without incurring large premium obligations. The plan will add another feature to our organization and increase the value of membership.

Doubtless there will, on first reading, arise a question of doubt as to how Insurance Corporations can afford to take on such risks. Your scepticism will not be well founded because the proposition emanates from two of our largest and financially sound Insurance Corporations—The Aetna and The Travellers. Such insurance is now in force in a goodly number of groups.

The Insurance is obtainable. The Companies offering this protection are solvent and have large reserve funds.

The question at issue is: **Do our members want it?** If so, will you not at once convey your approval or disapproval to your Secretary? With such an expression of sentiment it will then be possible to undertake the necessary work to collect the requisite data. Please let us have your expression **NOW**.

# Fifty-Second Annual Meeting

## Battle Creek-Calhoun County

September 4, 5, 6

PLAN TO ATTEND NOW

The Council, at its January meeting, voted to accept the invitation extended by the Calhoun County Society to hold our 52nd Annual Meeting in Battle Creek on September 4, 5 and 6.

There can be no doubt but what the facilities afforded by that city and its commercial industries added to the enthusiasm, ability and hospitality of the Calhoun County profession give the conclusive assurance that our next state meeting will be a most successful one.

Let every member commence planning now to attend that meeting. Urge your neighbor to attend. Boost continually for a big, successful meeting.

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### MILITARY AND MENTAL TRAINING.\*

As a specialist treating cases of nervous and mental disease and those of addiction to drink and drugs, I am more and more forcibly impressed with the importance of universal military training in their prophylaxis. It grows upon me every minute. Prevention of insanity and nervous deterioration implies establishing a high degree of physical resistance, minimizing the evil effects of heredity, cultivating self-control through discipline, substituting habits of regularity, order and industry for those of idleness and self-indulgence, and clarifying the moral atmosphere surrounding the individual as completely as practicable. To these ends physical, mental and moral hygiene are necessary and in my opinion they may be better supplied to the vast majority through intelligently directed military training than in any other manner.

It is undeniable that such training compels habits of regularity in eating, drinking, and sleeping; that it strengthens the muscular and osseous systems, promotes digestive, lung, heart, kidney and skin functions; that it straightens the figure, removes the slouch and overcomes local muscular inadequacies. One must be a cheap appreciator indeed, who can look upon a company of West Point cadets without a glow of interest in the purely physical side of their development. They constitute a group of husky, upstanding, forward looking, high stepping (not goose stepping) young men.

On the mental side, military training brings about quickness of perception, courage, self-reliance, and obedience. It should be accompanied in this country with an educational course in the fundamentals of democratic government, in universal history for much to avoid, and in American history for much to emulate.

I have heretofore written of the relation of symbolism to thinking, feeling and acting. It in large measure determines thinking and its importance can scarcely be overestimated. That it should be developed along the lines of patriotism and devotion to country is obvious. The flag is the emblem of governmental authority. Drilling and discipline under the flag cannot fail to be of vast importance in determining loyalty and shaping the prospective citizen's attitude toward the aims, methods, and interests of the government. I cannot escape the feeling that had there been a system of general military training in the United States of America, the evils of the hyphen so obvious during the past two and a half melancholy years would have been practically non-existent. One ap-

\*Reprinted, Sea Power, Feb., 1917.



preciates what costs him something in money or effort; he is unwilling to relinquish that which he has helped to upbuild and would be more than apt to defend that which he had assisted in establishing. No sinister parental influence harking back to the traditions and educational influences of fatherlands, motherlands or sisterlands would be likely to offset the loyalty inculcated through well-directed discipline under the American flag.

On the moral side, there is similarly great need of opposing a counterweight to the impulses and forces which from the pubescent age on to twenty are scattering, unreliable and easily slanted toward the objectionable and criminal. A problem presented at the present day is most perplexing to penologists. To the thinking, it is obvious that bandit, thug, and strong-arm fraternities are recruited from among the young. The boy is peculiarly impressionable at and near the age of puberty. Unless during the two or three years immediately following this critical period there are established habits of obedience, respect for authority and reverence for that which is good and worth while, the individual is apt to become a menace to society. Parental and school influences are regrettably inadequate to this end and the problem can scarcely be solved by penologists, sociologists and philanthropists unassisted. The state should do its full portion and through shielding the individual and directing bizarre energies assist in moulding his character.

I know of nothing which would make more for the establishment of a democratic spirit than compulsory training with incidental *promotion and credits depending upon merit alone*. The spirit of bombast, show, snobbishness, and intolerance is not necessarily connected with military training. I say it is not *necessarily* connected. It is merely a danger to be avoided through careful selection of those at the top to whom the pusillanimous spirit of oppression is foreign and who are not concerned with frills, frippery and ostentation. Moreover, any disposition among civilians (or uncivilians) to discriminate against the musket-bearer and in

favor of the sword-bearer should be crushed under the heel of decent public sentiment in a manner similar to that employed by the cowboy in his relation with the rattlesnake. Snobs are a misfit in a democracy, whether in the army or elsewhere, and the military spirit, exemplified in certain countries, which is merely another name for swagger, show, and brutality, need not be transplanted to this.

The aim of rational military education in a democracy should be to develop, not the glorification of epaulettes, but a decent respect for the authority of the wearer, and courage and co-operation with him to given ends. Its fundamental theory should be the sane evolution of the individual for his own material well-being and in relation to the *defense only* of his country.

C. B. BURR, M.D.

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### *Editorial Comments*

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In compliance with the instructions imparted by the Council at its January meeting the following communication has been sent to the Board of Regents of the University of Michigan and the Board of Trustees of the Detroit College of Medicine and Surgery:

Feb. 10, 1917.

Board of Trustees,  
Detroit College of Medicine and Surgery,  
Detroit, Mich.

Gentlemen:

Firmly believing that an amalgamation of the University of Michigan and the Detroit College of Medicine and Surgery would bring about the establishment of a strong medical-educational institution in Michigan, the Council of the Michigan State Medical Society, at its regular mid-winter session, unanimously resolved that an expression of this belief be conveyed to the Board of Regents and to the Board of Trustees of these respective institutions.

The Council, speaking in behalf of the organized medical profession in Michigan, urges particularly that the officials of these two institutions become aggressively active in an effort

to bring about such an amalgamation and to cause to be established, as speedily as possible, a medical school in Michigan that will be the foundation, in which in a few years should be one of our strongest medical schools in this country.

The Council urgently requests that you take such steps as may be necessary to consummate this much desired project.

The Council further tenders its good offices and whatever assistance it may be possible to render to accomplish this object.

Yours truly,

F. C. WARNSHUIS, Secretary.

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If the GROUP INSURANCE plan appeals to you will you not promptly express your endorsement to the Secretary?

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Your annual dues are payable before April 1st. If you have not already done so please remit to your county secretary in order that your name be not placed upon the suspended list. You must not permit such delinquency.

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The selection of Battle Creek as the place for holding our next annual meeting is receiving the hearty approval of our members. As soon as the Council decision was announced the Battle Creek profession immediately became active. Committees have been appointed and are now busily engaged in perfecting their plans for the care and entertainment of their guests. We are confident that a most profitable and largely attended meeting will be held.

The Scientific Committee will hold its meeting in March. It is the purpose of this Committee to prepare an attractive program that will be of pertinent topics, presented in a manner that will impart the fullest possible authoritative information and which will evoke intensive discussion. Plan now to attend this session.

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We have been reading much about birth control and the arrest of leaders of that movement. We have also read that the New York Academy of Medicine condemned the principles and

objects of that propaganda. However, we have been unable to find anywhere a pronouncement of plans or measures whereby the end sought might be attained. It would be interesting indeed to learn of their nature. Our present view-point is that it is an impossibility to confidently declare that control of conception can be empirically regulated—that conceiving and giving birth to a child may be achieved or avoided at the human inclination or disinclination. Physiological control is not absolutely attainable. Sociologically grave problems concomitant warn us of pending perils. Legitimate regulation cannot be enforced. Advocates of the movement are treading on dangerous grounds.

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The annual report of your officers and the minutes of the January meeting of the Council are contained in this issue. Every member is urged to carefully read these published records. Particularly do we urge that you give a little more time and thought to the activities of your county society. Be a booster in your locality. Never has there confronted the profession so many problems that call for concerted thought to secure their proper solution. Organized medicine must assume the responsibility that is being imposed.

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Vol. I, No. I of the Radium Quarterly has just reached us. This a new publication devoted to Radium Therapy and is published by the Radium Institute of Chicago. It contains an excellent review of the literature upon the subject as well as numerous articles and illustrative cases revealing the results obtained from the use of radium in malignant and other diseases. It is a most interest awakening issue and causes one to feel that it well behooves the practitioner and surgeon to familiarize himself upon the value and application of radium therapy. This Quarterly will be a valuable guide.

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A bill providing for Social Insurance has been introduced into our legislature. Do you know what it provides or means to you as a



physician? If not, we suggest you secure a copy by writing to your representative. It will undoubtedly not be enacted at this session but it is bound to become a law in the early future. It behooves you to awaken and participate in the discussion and adjustment of this sociological problem.

County Secretaries are again urged to send in reports of their meetings. If your executive tasks are heavy then please arrange to have your Society appoint an official reporter whose duty it will be to report your meetings to *The Journal*.

Our *Journal* has scored another hit!

The increasing value of our *Journal* as a medium in which reputable physicians' supply houses may publish their announcements, is securing new advertisers and renewals of contracts.

For a number of years the Editor has been endeavoring to get back to our advertising columns, The J. F. Hartz Co., the foremost physicians supply house in the United States and Canada, with stores in Detroit, Cleveland and Toronto.

This firm discontinued their ad with us because of a misunderstanding on rates some years ago, but on a recent visit to Detroit we were successful in securing a renewal from them for a half page. The first announcement of their advertising appears in this issue. We welcome them back to our pages, feeling sure they will find this investment a profitable one.

The Editor desires to bespeak a good word for this firm, and it should be the attitude of the Profession of the State of Michigan, to patronize a Michigan house in preference to outsiders. The same applies to State Institutions that are buying altogether too many goods from outside rather than favoring the taxpayers of Michigan. We make our livelihood from Michigan taxpayers and not from outsiders.

We have promised these people the usual loyalty that exists among our members of the Michigan State Medical Society. We have always found that they make our State Meetings more interesting as exhibitors, and have contributed liberally to our support.

### Deaths

Dr. W. A. Whitney of Mecosta County, pioneer physician of Big Rapids died Feb. 13, 1917. He was a Mason and Civil War veteran.

### Correspondence

February 17, 1917.

Dr. F. C. Warnshuis,  
Grand Rapids, Michigan.

Dear Doctor:

The Committee on Civic and Industrial Relations of the Michigan State Medical Society met in the Wayne County Medical Society Building, Detroit, Thursday, February 15, 1917.

There were present: Drs. Biddle, Manwaring, Amberg, Kinsey, Stockwell and Walker.

A report on Industrial Accident Insurance with three recommendations by Drs. West and Bourland was read by Dr. Walker and on motion was received and the sub-committee ordered continued.

A report on Specialties was presented by Drs. Manwaring and Amberg, received and discussed.

Drs. Kinsey and Walker presented a discussion on health insurance and suggested the holding of educational meetings on health insurance in Detroit and Grand Rapids in April and May at which Dr. Rubinow should be invited to participate. A motion to that effect was made, seconded and carried and Drs. Kinsey and Ramsdell instructed to provide for such meetings in Grand Rapids and Dr. Walker in Detroit.

It was moved and carried that the committee adjourn to meet again the latter part of June.

Yours truly,

F. B. WALKER, Chairman.

### State News Notes

BAD BILLS MADE GOOD. SEND FOR PARTICULARS. NO RETAINING FEES. PUBLISHERS ADJUSTING ASSOCIATION. MEDICAL DEPARTMENT DESK J. RAILWAY EXCHANGE BUILDING, KANSAS CITY, MISSOURI, U. S. A.

The Frank S. Betz Company of Hammond, Indiana, have just issued a splendid catalog of Hospital Equipment including high pressure sterilizers, steel hospital furniture and therapeutic bath equipment. These products from a modern factory, thoroughly organized enabled the manufacturer to justify the claim of service, quality and price and to guarantee their products. When in need of such equipment for your office or your local hospital it will be advantageous to consult this manufacturer before purchasing.

Governor Sleeper has appointed Dr. Guy L. Kiefer of Detroit and Dr. W. F. English of Sagi-

naw as members of the State Board of Health to succeed Dr. J. H. Kellogg of Battle Creek and Dr. H. S. Bartholomew of Lansing, whose terms expired.

The Detroit Board of Health has requested from the City Council an appropriation of \$3,383,007 for the coming year. This budget includes \$1,000,000 for an addition to the Tuberculosis Hospital.

Dr. Frederic M. Loomis, recently instructor in obstetrics and gynecology, in our State University, has moved to Oakland, California and will limit his practice to obstetrics and gynecology.

The Kent County Medical Society held its annual banquet on Feb. 19 with Dr. Reuben Peterson of Ann Arbor as toastmaster.

Dr. A. P. Biddle of Detroit is announced as a candidate for membership on the Board of Education.

A bill has been introduced in the legislature seeking a new appropriation of \$100,000 for anti-tuberculosis work.

Plans for a municipal medical library in Detroit were launched at a dinner given by Dr. A. D. Holmes.

The Staff of the Blodgett Memorial Hospital, Grand Rapids, conducted a Medical and Surgical Clinic on Feb. 28.

Lansing Board of Education has selected a staff of physicians to conduct regular school inspection.

Dr. Byron H. Jenne has removed to 30 Adams Ave., West, Detroit.

Dr. H. B. Knapp of Ionia has removed to Lansing where he will enter practice.

Dr. L. Youngquist will succeed his father at Marquette.

Dr. B. Friedlander of Sebawaing is contemplating removal to Saginaw.

The Clinical Congress of Surgeons will hold its next meeting in New York on October 22, 1917.

The C. & H. Mining Company of Calumet are planning the erection of a new company hospital.

Harper Hospital closed the year with a deficit of \$9,854. The total number of patients was 12,426.

Dr. A. A. Rosenberry of Benton Harbor has been seriously ill with pneumonia.

Dr. and Mrs. J. F. Snyder of Alma are spending the winter in California.

Dr. J. A. McPherson of Grand Rapids is seriously ill at the Blodgett Memorial Hospital.

## County Society News

### BRANCH COUNTY

The annual meeting and banquet of the Branch County Medical Society, was held in the parlors of the Presbyterian church, Coldwater, on Tuesday evening, Jan. 23, 1917.

Toasts were responded to by Drs. D. H. Wood, Samuel Schultz, A. G. Holbrook and Newton Baldwin.

The banquet was served by a committee of the "Presbyterian Sisterhood," and was greatly enjoyed by the doctors and their wives present.

At the business meeting the following officers were elected for the ensuing year.

President—Dr. R. W. Ridge.

Vice President—Dr. A. G. Holbrook.

Secretary-Treasurer—Dr. W. H. Baldwin.

Delegate to State Society—Dr. D. H. Wood.

Alternate—Dr. M. H. Coan.

Member Medico Legal Com.—Dr. S. Schultz.

W. H. BALDWIN, Secretary.

### CHIPPEWA COUNTY

A regular monthly meeting of the Chippewa County Medical Society (Chippewa, Luce and Mackinac counties), was held at the Park Hotel, Sault Ste. Marie, Mich., on Tuesday evening February 6th.

Under "Clinical Cases" a report was made in which the mother who had been through two normal terms of pregnancy, one of which was multiple, engaged her physician to confine her again three months hence. On the day following her visit to the physician a hurry summons came because the woman had fainted and was in a state of collapse. Operation, the following morning, disclosed only an



atrophied state of uterus and ovaries, with slight inflammation of the tubes, and evidences of a former inflammatory process about the appendix. The latter was removed and the adhesions separated.

Dr. R. C. Winslow read a paper on the "Treatment of Wounds" which was generally discussed by the members present.

R. C. WINSLOW, Secretary.

### HOUGHTON COUNTY

At the annual election of officers of the Houghton County Medical Society, the following officers were elected:

President—R. B. Harkness, Houghton.

Vice-President—M. D. Roberts, Hancock.

Secretary-Treasurer—J. T. Holmes, Calumet.

Censor for Three Year Term—W. H. Dodge, Hancock.

Delegate—E. T. Abrams, Dollar Bay.

Alternate—A. H. Fisher, Hancock.

The program of the February meeting was as follows:

1. A Discussion of the Army Medical Department  
Dr. P. D. McNaughton.

2. Treatment of Fractures of the Metacarpals  
and Phalanges by Extension.

Dr. H. R. Sharpe.

It was suggested that the papers be prepared for publication since they were of such general interest. Dr. Sharpe demonstrated his apparatus and exhibited many X-ray plates. The method is used in treating such fractures among employes of the Calumet and Hecla Mining Co.

Dr. McNaughton gave some first hand experiences from the border.

J. T. HOLMES, Secretary.

### SHIAWASSEE COUNTY

The officers elected at the annual meeting of the Shiawassee County Medical Society on Dec. 22, 1916 were as follows:

President—Dr. J. O. Parker, Owosso.

Vice-President—Dr. G. T. Soule, Henderson.

Secretary-Treasurer—Dr. W. E. Ward, Owosso.

Delegate—Dr. P. S. Willson, Owosso.

Alternate—Dr. J. J. Haviland, Owosso.

Board of Directors—Drs. J. A. Rowley, Durand; A. L. Bailey, Chesaning; H. T. White, New Lothrop.

Medico-Legal Representative—Dr. C. McCormick, Owosso.

W. E. WARD, Secretary.

## Miscellany

### A WIDELY USEFUL SOAP.

Most medical practitioners are doubtless familiar in a general way with the properties and purposes of Germicidal Soap (McClintock's formula)—a product which has been marketed for many years by Parke, Davis & Co. and which appears to acquire a constantly widening sphere of usefulness as time passes.

In obstetrics and gynecology Germicidal Soap is a valuable antiseptic, deodorant and lubricant for the examining finger or instruments.

In surgery it is an admirable general disinfectant. It can be used to prepare antiseptic solutions without the necessity of measuring or weighing and without waste. For sterilizing hands, instruments and site of operation it is unsurpassed. The germicide contained in it is more powerful than mercuric chloride or phenol, and it does not coagulate albumin.

In office practice Germicidal Soap is efficacious in the treatment of parasitic diseases and as a disinfectant for the hands after examinations.

Other ways in which the soap may be advantageously employed are these: to cleanse wounds, ulcers, etc.; to lubricate sounds and specula; to disinfect surface lesions; to control itching in skin affections; to make solutions for the vaginal douche; to destroy the odor of hyperidrosis; to cleanse the hair and scalp and to remove and prevent dandruff; to disinfect vessels, utensils, etc.; to wash and sterilize bed-linen, handkerchiefs and other appurtenances of the sick-room.

From the foregoing it will be seen that Germicidal Soap, P. D. & Co., is more than a soap—more than a germicide. It is, in fact, an antiseptic, disinfectant, deodorant, sterilizer, lubricant and detergent—all in one. It has been called "the soap of a hundred uses." The designation is not inapt.

*Sulfo-Selene-Walker.*—The *New York Tribune* explains that it was caught "napping" when it gave space to a discussion of Dr. C. H. Walker's cancer treatment, "Sulfo-Selene." It explains that, while there is probably no single false statement in the published interview self-sought by Dr. Walker, the impression sought to be conveyed that Sulfo-Selene will cure cancer, rests on no such foundation of evidence as to justify a reputable and responsible physician in setting it forth in the public prints. The *Tribune* explains that Dr. Walker's preparation has failed to obtain that recognition which would have given it a scientific status, namely, recognition by the Council on Pharmacy and Chemistry (*Jour. A.M.A.*, Dec. 16, 1916, p. 1864).

## THE MAKING OF AMPOULES.

An illuminating article on the manufacture of glaseptic ampoules of sterilized solutions as conducted in the laboratories of Parke, Davis & Co., appears in a recent issue of *Therapeutic Notes*. It is noteworthy because of the emphasis placed upon the careful methods which are essential in the production of both solution and container.

"First of all," says the *Notes*, "the greatest care is taken in the selection of the glass from which the ampoules are made. It is of the first quality, and must be free from alkali in order to obviate any possibility of contamination or chemical action on the solution. This is vital, for it is imperative that the purity and stability of the contents of the ampoule be assured.

"The medicaments used in preparing solutions are treated with the most suitable solvents—e. g., oils, distilled water, or physiologic salt solution—and the solutions are invariably adjusted to a fixed standard of strength; that is, each contains a specific amount of medicament to a given volume, thus insuring accuracy of dose. The solutions are subjected to the process of sterilization, either by heat applied in an autoclave, at intervals, for four or five days, or by passage through a Berkefeld or Pasteur porcelain filter. They are then passed into sterilized bottles, and samples are submitted to the biological department for a series of sterility tests that extend over a period of five days.

"The ampoule containers, cleansed and sterilized, are filled with the sterilized and tested solutions by machinery. The neck of each ampoule is hermetically sealed in a gas flame, and ampoules and contents are again subjected to the sterilization process, this time by the careful application of heat, care being taken to adjust the temperature of the apparatus to such a degree that the medicament will not suffer injury. The hermetically sealed container effectually protects the solution from bacterial contamination and oxidation, while the actinic effect of light is prevented by enclosure of each ampoule in an impervious cardboard carton."

As indicative of the trend in hypodermatic medication it may be noted that more than sixty sterilized solutions are now supplied by Parke, Davis & Co. in glaseptic ampoules. Convenience, asepsis, stability, accuracy of dose—solutions in ampoules appeal to modern practitioners on these grounds.

*Plant Juice*.—"Plant Juice" is a "patent medicine" which is said to yield an annual profit of 90,000 dollars to Col. Frank A. Dillingham of Cincinnati. The Milwaukee Health Department reports that, in addition to 20 per cent. alcohol, "Plant Juice" contains aloes, licorice with possibly a little cascara sagrada or sennas. This nostrum is advertised as "beneficial" in anemic conditions, nervousness, sickness and debility, headache, backache, dyspepsia and various other ills (*Jour. A.M.A.*, Dec. 2, 1916, p. 1685).

*More Misbranded Nostrums*.—The following nostrums were found to be sold with false and fraudulent therapeutic claims: E. K. Thompson's Barosma Compound was found to be a watery-alcoholic solution containing bromid of potassium 3.85 per cent., potassium acetate 2.6 per cent., extract of buchu and sugar 18.4 per cent. It was sold under the inferential claim that it was a cure for Bright's disease, inflammation of the kidneys, etc. Sayman's Vegetable Liniment Compound, sold for the treatment of deafness, fever, ague and even sore nipples, toothache and chilblains, was found to be a hydro-alcoholic solution of camphor, chloroform, capsicum, oil sassafras, ammonia and plant extractive, and probably turpentine. Knorr's Genuine Hien Fong Essence or Green Drops was found to contain 69.72 per cent. alcohol (by volume), 0.35 per cent. ether (by volume), 0.28 grams nonvolatile matter per 100 c. c., flavored with oil of spearmint. It was said to be an excellent remedy for diseases of the stomach and bowels and many other ailments (*Jour. A.M.A.*, Dec. 9, 1916, p. 1775).

## Doctor:

Remember if you don't attend your Society Meetings Regularly you can not derive the benefits of these instructive and inspiring gatherings.



# The Journal

## OF THE

# Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVI

GRAND RAPIDS, MICHIGAN, APRIL, 1917

No. 4

### Original Articles

#### ADHESIONS OF THE PELVIC COLON.\*

JAMES T. CASE, M.D., F.A.C.S.

Associate Surgeon to the Battle Creek Sanitarium and Director of the Roentgen Department.

BATTLE CREEK, MICH.

The purpose of this paper is to bring to your attention certain considerations relating to the

deal with the pelvic colon along with the other pelvic organs, taking their relations into account in estimating the importance of signs and symptoms of pelvic disease.

The shape and position of the colon deserve at present comparatively little attention—less than is usually accorded to them. Comparative studies on the identical patient under the identical circumstances easily demonstrate the variableness of the position of the colon and what little reliance can be placed upon its location and shape as it may appear in a roentgenogram at any given time. This generalized remark applies with particular emphasis to the consideration of those portions of the colon

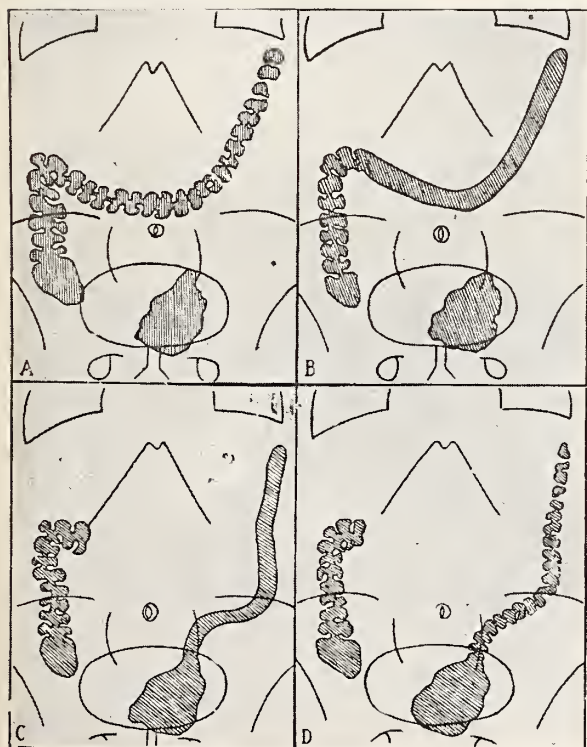


Fig. 1. Four drawings (after Holzknecht) illustrating the "mass" peristaltic movement. In A the colon is uniformly filled from cecum to splenic flexure and the indentations due to the haustral contractions are nicely seen. In B these haustral markings have disappeared from the hepatic flexure on. In C, a few seconds later, the content of the transverse colon has moved over into the descending and iliac colon, the haustral markings not yet having appeared. After some minutes, fifteen or twenty, the haustral markings are reappearing.

function of the pelvic colon and the significance of adhesions of that region. Gynecologists must

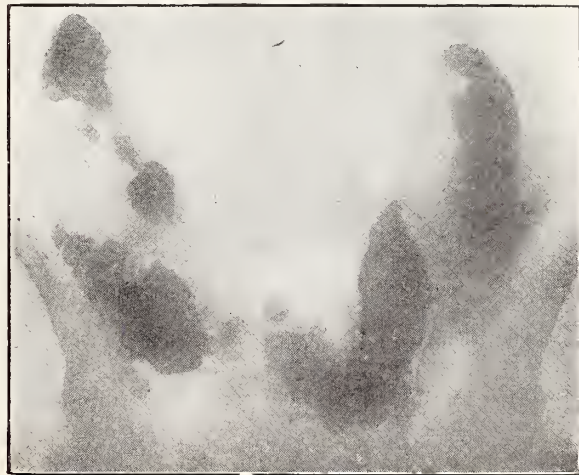


Fig. 2. Roentgenogram illustrating "mass" peristaltic movements such as are figured in preceding diagram.

which possess a long mesocolon, viz. the transverse and the pelvic colon.

I believe that in the great majority of cases the cause of constipation is to be found in the pelvic colon or rectum, although the subjective symptoms may seem to be more pronounced in the proximal colon. Doubtless, the constipating lesion is often a complex one and frequently associated with adhesions. Such adhesions are not only a cause of constipation, but often also a result of it, the situation thus assuming more or less the nature of a vicious circle.

The observations upon which this paper is

\*Read before the Section on Gynecology and Obstetrics, Michigan State Medical Society, at Houghton, Mich., Aug. 16, 1916.



based have been made on a large series of patients at the Battle Creek Sanitarium, the roentgen observations being made in the Roentgen Department by my colleague, Dr. L. L. Jones, and myself, and the surgical operations being performed at the Sanitarium Hospital in the surgical services of Drs. Kellogg, Harris and myself.

In introducing this discussion, it may be well to review certain anatomical facts. According to the newer terminology, the colon is divided into the following parts:

- (1) The *cecum*, being the portion below the ileocolic valve;
- (2) The *ascending colon* as far as the hepatic flexure;



Fig. 3. Roentgenogram made fifty hours after ingestion of the barium meal in a case of carcinoma of the descending colon. It will be noted that the barium is backed up in the proximal colon in a manner demonstrating the characteristic effect of exaggerated antiperistalsis. The densest mass is in the cecum and ascending colon rather than in the distal colon, just proximal to the tumor.

- (3) The *transverse colon*, being the portion between the hepatic and splenic flexures;
- (4) the *descending colon*, from the splenic flexure to the crest of the left ilium;
- (5) The *iliac colon*, from the crest of the ilium to the inner border of the left psoas muscle;

(6) The *pelvic colon*, from the termination of the iliac colon at the inner margin of the left psoas muscle to the front of the body of the third sacral vertebra, forming when empty

an acute angle with the rectal ampulla. The length of the pelvic colon is variable, the aver-



Fig. 4. Roentgenogram made twenty-six hours after ingestion of the barium meal. A certain portion of the barium has passed into the pelvic colon and rectal ampulla. The remainder is banked up in the colon, mostly in the proximal colon, in a manner characteristic of exaggerated antiperistalsis—in this case due to excessive tonicity of the distal colon. There was no pelvic colon obstruction in this case.



Fig. 5. Roentgenogram showing barium banked up in the proximal colon (cecum, ascending colon and first portion of transverse colon) one hundred hours after its ingestion. The obstruction occurred in the pelvic colon, being due to adhesions associated with carcinoma of the uterus.



age being 17 inches. It may be as long as 33 inches or as short as 5 inches.

The position of the pelvic colon is very variable. The following is modified from Cuning-



Fig. 6. A normal colon, enema-filled. The pelvic loop has risen up out of the true pelvis, demonstrating its mobility.

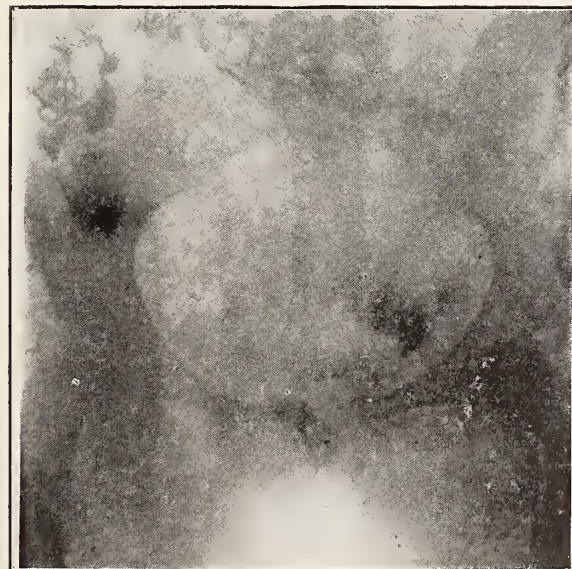


Fig. 7. Same colon shown in Fig. 6 a few minutes later after patient has expelled the enema. It will be observed that the success of the expulsive effort was ideal, the entire colon being emptied.

ham's description as its most common arrangement:

Beginning at the inner margin of the left psoas, it first plunges over the brim into the pelvis, crossing this cavity from left to right.

It next bends backward and then returns along the posterior wall of the pelvis toward the middle line, where it turns down and passes into the rectum.

The normal pelvic colon, when empty, lies in the posterior part of the pelvis immediately in front of the rectum, but as it becomes filled it rises into the abdominal cavity so that the angle it forms with the rectum becomes less acute.

It is very important to note that the pelvic colon normally forms a freely movable loop, its mesentery being longest in the middle of the loop and shortest at the extremities. We therefore expect to find the large bowel relatively fixed at the junction of the iliac with the pelvic colon (the iliopelvic junction) and at the junc-

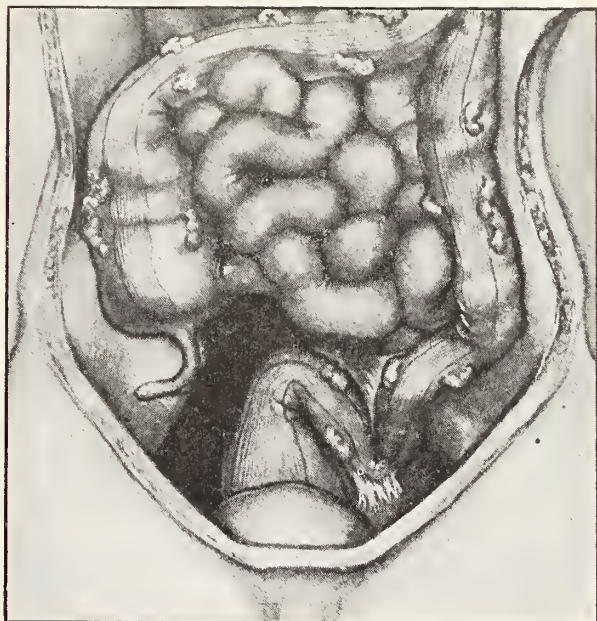


Fig. 8. A drawing (Tuttle) showing an acute flexure of the duodenum with adhesions involving the left tube and ovary. This is a graphic illustration of the usual manner in which pelvic colon adhesions interfere with the normal, free mobility of the pelvic loop.

tion of the pelvic colon with the rectum (the pelvirectal junction).

The large intestine is normally emptied below the splenic flexure in the act of defecation, the proximal colon and right half of the transverse colon being the seat of antiperistalsis, as has been shown by Cannon, Jacobi and others in animals, and by the experiments of myself (1) and others in man. As the result of these antiperistaltic influences, there occurs in the proximal colon a certain delay which permits further digestive and absorptive processes to take place.

The transportation of food from this zone of antiperistalsis into the distal colon is prin-



cipally brought about by the so-called "mass movements," first described by Holznecht. By these mass movements, which are said to occur about six times daily, large boluses or masses of fecal matter are rapidly carried across the transverse colon into the distal portion of the bowel.

Other movements by which the transportation of food occurs are the large pendulum movements, first described by Rieder, and the small pendulum movements which are also called haustral contractions. The latter have been particularly well described by Schwartz. These lesser anastaltic movements do not, however, succeed in bringing about any very satisfactory propulsion of bowel content, this being largely

fecal matter descends from above, the pelvic colon gradually fills from below upward. As it fills it rises, so that the acute angle it forms



Fig. 9. Roentgenogram of an enema-filled colon in a case of adhesions of the pelvic loop with marked constipation. See Fig. 10.

brought about by the "mass" movements above referred to.

Normally, the descending and the iliac colon are found either empty or containing only a small quantity of fecal matter in transit. The fecal material gradually accumulates in the pelvic colon above the pelvirectal flexure which, as above stated, is formed by the junction of the pelvic colon with the rectal ampulla. Here there occurs a normal obstruction to the onward passage of the feces, as O'Beirne was the first to show.

Until just before the act of evacuation, the rectum is normally empty, except occasionally for a few traces of fecal matter: remainders of the previous defecatory act. As more and more

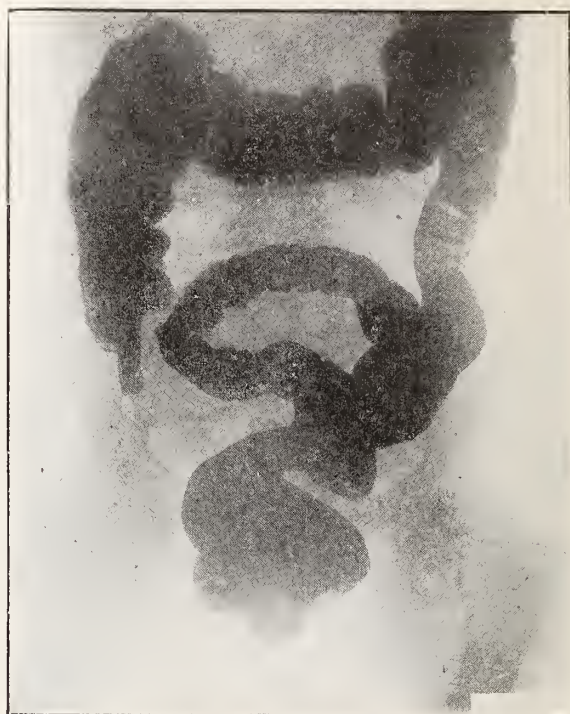


Fig. 10. Roentgenogram of same colon as shown in Fig. 9 after operation for release of adhesions of the pelvic loop with omental suspension of the loop thus mobilized. Almost complete relief of constipation.



Fig. 11. Another case of pelvic colon adhesions where the adhesions, by their nature, seriously interfere with the evacuation of the contents of the colon. This case was completely relieved by operation.

with the rectum, when empty, is obliterated and the way is made easy for the propulsion of fecal matter into the rectum. As fecal matter thus



begins to pass from the pelvic colon into the rectum, the resulting sensation of fullness leads



Fig. 12. An enema-filled colon in a case of very serious constipation, a post-operative development, after hysterectomy. Ordinarily the patient should be able to expel practically the entire content of the enema-filled colon at one effort (Figs. 6 and 7). As it was the patient could only empty the contents of the lower portion of the rectal ampulla. (See Fig. 13)

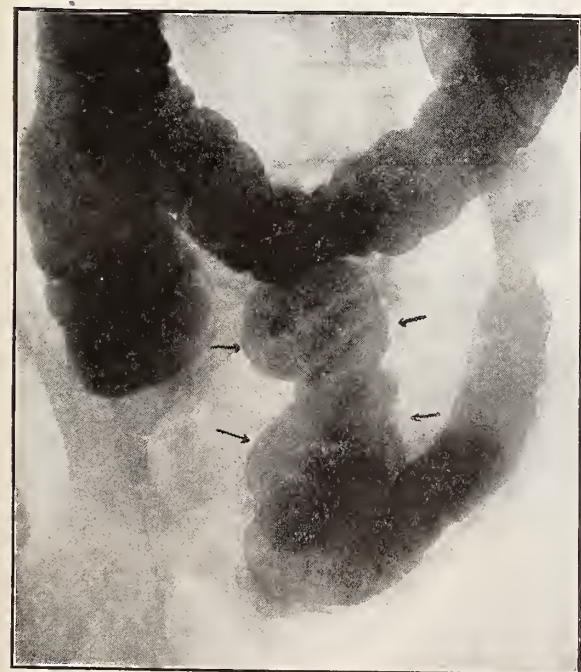


Fig. 13. Enema-filled colon shown in Fig. 12 after the patient's most earnest effort to expel the enema. The hindrance evidently lies in the adherent rectal ampulla and lower pelvic colon.

desire to evacuate at the proper time, this may be voluntarily produced by contraction of the abdominal muscles and diaphragm, forcing fecal matter into the rectum and thereby setting up certain impulses which pass to the defecatory center in the lumbar spinal cord, where they set in action the reflex acts necessary to complete the evacuation. Among these activities are strong peristaltic contractions of the colon, resulting in mass movements.

It was formerly believed that the strong peristaltic contractions of the large bowel, completing the act of defecation, were limited to that portion of the colon below the splenic flexure, but numerous observations on a large



Fig. 14. Another illustration of obstruction low in the distal colon. Roentgenogram shows colon fifty hours after the meal and immediately after the patient's persevering effort to evacuate the bowel. It will be observed that only the lower half of the rectal ampulla was emptied. This patient had been operated upon for the removal of the appendix without relieving the right lower quadrant symptoms which led to the operation.

number of subjects after an opaque meal assure me that these powerful contraction movements frequently begin in the ascending colon and may even commence in the cecum. These powerful peristaltic movements are, I believe, identical with the peristaltic mass movements above referred to, by which food is propelled from the proximal colon into the distal colon. The most favorable time for observing mass movements is during or immediately after defecation. It is also noticeable that many of

to a desire to evacuate the bowels. Hertz draws attention to the fact that in the absence of any



the patients in whom we have observed these mass movements have exclaimed at the time of the movement that they felt as though they could move the bowels.

The normal defecatory act should clear the colon below the splenic flexure. When the colon is tested by the injection of the opaque enema,



Fig. 15. Case of multiple diverticula of the colon with perisigmoiditis and tumor just below the brim of the true pelvis on the left side. The arrows point to a few of the diverticula, which show a barium residue from the meal given seventy-four hours previously. The present roentgenogram was made after an attempt to fill the colon by enema. Note the distension of the rectal ampulla due to the force required to send the liquid enema through the stenosed iliac colon.

the patient should be able to expel the entire enema content of the colon at one effort. When the pelvic colon is bound down by adhesions or fixed by the pressure of large pelvic tumors, the defecatory act fails to empty the pelvic loop.

In some cases there is absolute inability to expel fecal matter owing to anal fissures, hemorrhoids, rectal ulcers or atony of the rectal musculature. Such cases should be classified under rectal constipation. In another class of cases the patient can empty only the rectum below the pelvirectal junction, owing to a kind of invagination of the too redundant pelvic colon.

In a large percentage of cases we observe that the patient can empty the rectal ampulla and more or less of the pelvic loop, but no more. On re-examination, it is characteristic that the

point of apparent hindrance is always the same, and may be described as occurring at the pelvirectal junction, the middle of the pelvic loop or just below the iliopelvic junction, as the case may be. Such hindrance is in my opinion definitely associated with fixation of the colon, usually by adhesions, and by careful fluoroscopic observation of the colon before and after normal defecation and in connection with the barium enema test, both during its injection and after its expulsion, we may definitely determine the presence of such binding adhesions. It may be wiser to speak of the condition as abnormal fixation, admitting that a certain degree of fixation may be normal.

When tested by the opaque enema, the ampulla suffers marked dilatation in cases of adherent pelvic colon, the amount of distention depending upon the degree of obstruction, the length of time it has existed, and whether or not the patient has made an earnest effort to keep the bowel cleansed by enemas. Some of the most pronounced cases of rectal distention have been observed in patients who have practiced the injection of large enemas.

Enterospasm very often attends adhesions of the pelvic colon, but it may also, of course, be present as an expression of irritation of any other kind. Possibly the nodal bundle presiding over this segment of the colon is the seat of disease or irritation; or there may be a chronic colitis or a diverticulosis, or any one of a number of conditions simulating colitis or attended by this condition as a symptom.

The work of Keith is bringing forward a very attractive theory concerning the cause of enterospasm (2).

A persisting spastic contraction of the pelvic colon offers an obstruction which may be as serious in its resulting alimentary toxemia as an organic lesion. It is often noted that, associated with spasticity in the pelvic colon, there is a dilatation of the proximal colon leading ultimately to an atonic condition of the bowel musculature in the cecum and ascending colon, the patient's complaints being chiefly in reference to the cecum and ascending colon.

Many of these patients complain of pain in the cecal region, even after removal of the appendix. In fact, I believe the appendix is often unwisely operated on because of a chronic pain in the right lower quadrant. (I do not, of course, refer to operations for acute or recurring appendicitis). Some patients describe a chronic tenderness in both iliac regions. I am convinced that the distress and pain so fre-



quently described on the right side is more often due to chronic cecal stasis, whereby the appendix may become involved if the patient still possesses it, the cecal stasis being the result of obstruction in the distal (or pelvic) colon and the exaggerated antiperistalsis attending it.

Some cases of pelvic colon spasticity are seen to be associated with multiple diverticula, the detection of which I have fully considered elsewhere (3). Carcinoma of the pelvic colon or rectum is occasionally the associated lesion (4). Both carcinoma and diverticulosis are important causes of pelvic colon obstruction, aside from the enterospasm they may set up. No more space will here be devoted to these subjects, as my principal object in appearing before you is to urge the importance of adhesions of the pelvic colon, the importance of dealing with them surgically in properly selected cases, the great need of adopting an operative technic which will minimize the likelihood of such adhesions forming, and the inadvisability of oper-

pelvic colon is more or less fixed at its two ends, being freely movable in the middle of the loop. Hence, the adhesions will be most significant when they can be shown to involve the middle of the pelvic loop.

The method of dealing with these adhesions surgically is a vexing one and a problem to which we feel the last answer has not yet been given. In our work we have occasionally done an operation suggested by Dr. Kellogg by which the pelvic loop, when fixed, is supported in its lifted position by attachment to the omentum, the latter being sutured to the anterior abdominal wall. This secures for the pelvic colon a swinging attachment which, though not fixing it, holds it out of the bottom of the pelvis. The results of this type of operation, though not done on a large series of patients, have usually been very satisfactory in the cases selected for surgical relief.

Emphasis should again be placed upon the fact that the mere determination of the presence of adhesions is not sufficient indication for operation: there should also be proof of the functional disturbance due to, or associated with, these adhesions, this disturbance resisting the various non-surgical measures indicated.

It also seems proper to raise a question as to the advisability of the practice of using the pelvic operations, such as hysterectomy. No objection is raised to covering raw surfaces by the pelvic colon, providing this organ is allowed to fall into its natural position in so doing; but one often sees the pelvic colon crowded down in this procedure in a manner that invites the very kind of disturbing adhesions to the discussion of which this paper is devoted.

I would also call to your attention once more the needlessness of using the colon tube for administration of enemata. Yates, of Detroit, read a paper before this section of this Society some ten years ago on this subject. In over seven thousand cases I have injected the entire colon by means of the enema, employing only the ordinary rectal point inserted just within the anal sphincter, the patient lying supine. Only in those cases of organic obstruction, for instance, malignancies or tumors, did the enema fail to reach the cecum within a few minutes, under no more pressure than that afforded by having the enema container held about two feet above the patient. In the majority of cases two pints of enema sufficed to fill the colon, in rare instances three pints were required, but never more.

I will show you a number of slides demon-



Fig. 16. Roentgenogram showing colon tube coiled up in the rectum. This is the usual result when one attempt to pass a colon tube more than three or four inches into the bowel. It is impossible by manipulation to insert any colon tube higher than the junction of the iliac and pelvic colon, and this degree of success is unusual. The roentgenogram also shows some barium residue from a previous meal.

ating for these adhesions, when carefully conducted roentgen studies fail to provide proof of obstruction. Most adhesions do not obstruct. It is well to take account of the fact that the

strating the impossibility of introducing the colon tube higher than the junction of the pelvic with the iliac colon. It is perfectly possible to introduce the entire colon tube into the bowel, but the tube curls around upon itself in the pelvic colon, distending it sometimes to a very distressing degree.

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## THE EVOLUTION OF ANESTHESIA.\*

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Probably no achievements in the history of the Anglo-Saxon race have been greater, or more beneficent to humanity, than the discovery of ether by an American, and chloroform and the antiseptic methods, by Britons. The latter was thoroughly reviewed in the excellent paper recently presented to this Society. The object of my effort, this evening, is to give to you as fully, yet briefly as possible, the salient features of anesthesia in its development from its ancient, and crude use, to its modern scientific application.

The artificial production of deep sleep, and the abolition of pain, have been commonplace incidents from pre-historic, or at least very ancient, times, and have been alluded to with poetic license by writers of myth and fable in all eras. Homer makes his Ulysses succumb to the influence of Nepenthe. The suffering in the Divine Tragedy on Mount Calvary, nineteen centuries ago, was attemptedly assuaged by the draught of vinegar, gall and myrrh.

The anesthetics in use today did not usher in an unknown psychic state. Their importance lies in the fact that the coma they induce is more nearly under the control of the operator, and is followed by fewer subsequent evils, than the other agents preceding their advent.

In order that we, as modern practitioners, may understand fully the development of anesthetics in our work, it is interesting to review briefly the history of this induced condition.

As the archaeologists decipher the hieroglyphics of the ancient races, whether those of Egypt, India, Peru or Yucatan, they reveal the fact that no nation has yet been discovered that did not have some means of producing artificial sleep and insensibility to pain. In many instances the drugs, and methods of application, are clearly set forth.

The Egyptian priests fed the Initiates little cakes made from lotus seeds mixed with the juice of poppies, myrrh, etc., which produced a state of dreaminess, developing into stupor or ecstatic bliss, according as the proportions of the various ingredients were altered. Indian hemp, or cannabis indica, was another useful accessory, and Herodotus records that the priests of Isis had worked out to a most exact science, the varying amounts of Indian hemp to be administered in order to obtain all the stages of narcosis, from simple docility and absence of will, to complete obliviousness to pain. He likewise describes various lotions made from native herbs, used for bathing people about to be operated upon. This same fascinating historian also records an interesting phenomenon of which constant use was made in various parts of the Roman Empire. When the boiling waters from certain volcanic springs were mingled with fermented grape juice, most pleasing odors were developed, and from these vapors came "Prophetic dreams, and unconsciousness, blessed gift of the gods." This "vapor," which he praises so highly, was probably a crude form of ether.

When the Scythian physicians contemplated a surgical operation, preparations were made with ceremonial exactness. A tent was prepared by driving three long poles into the ground, and covering them with skins until the enclosure was practically air-tight. Within this tent a high fire was built, and covered with stones. When this formed a red-hot bed of coals, the patient was carried in. Hemp seeds were thrown on the heated stones, and the sufferer was then left alone until the fumes had rendered him perfectly insensible. After this stage was reached, he was conveyed from this tent into the presence of the operating physicians, who immediately set to work. It is recorded that every variety of amputation, and very original attempts at plastic surgery, were performed with great ease under this anesthetic. Many did not regain consciousness for several hours after the completion of the operation, but there was little mortality from the anesthetic itself.

Dioscorides, a Greek army surgeon in the

\*Read before Houghton County Medical Society, Jan. 8, 1917.



service of Nero, 54-68 A. D., describes an effusion of the mandragora, which was used by the Arabians to produce insensibility. The Arabians were very loath to make any use of this drug, as they were opposed to cutting or mutilating the human body. They preferred the healing power of herbs, and where these were inadequate, the patient usually looked on death as a necessary evil that it were better not to avoid.

Notwithstanding the slight use made of the mandrake by the Arabians themselves, they were very proficient in the theory of its administration, and from them Dioscorides learned its preparation and practical application. He used it extensively in his own work, and advised his pupils to follow his example. This enterprising physician left minute directions for the gathering, and preserving of the plants, and the preparation of the lethal dose itself. Translating his prescription literally, we read: "Boil down the roots in wine to a third part, and give one cyathus to those that are about to be cut, sawed, or burnt, in any part of their body, so that they may not perceive pain." Pliny, a few years later, testifies to the stupefying powers of this potion, saying: "It is drunk against serpents, and before cutting, puncturing or burning, lest they should be felt." The famous English surgeon, Sir Benjamin Ward Richardson, as an experiment, used the identical prescription of Dioscorides in the hospitals of London, in 1900, with the greatest success.

Chinese physicians for centuries have given preparations of cannabis indica by which their patients became totally insensible to pain, and could be operated upon every conceivable way. A Chinese "Herbal," of the Fifth century, B. C., mentions three ways in which hemp might be administered. It could be smoked; eaten in sweet-meats prepared with honey, sugar, and aromatic spices; or, the leaves and fruit could be boiled with water and butter. The butter absorbs the resinous matter which contains the active principle, and this butter when eaten will produce a delirium followed by deep narcosis. There is a loss, first of the sense of touch, then of all the other senses, followed by complete insensibility to pain, due, probably, to the non-concerted action on the part of the two halves of the cerebrum.

The Druids of Britain, and the wild races of ancient Gaul, when conquered by Rome, were using potions of various herbs to produce a lethal stupor. A lengthy catalogue of these

herbs, and descriptions of their uses, has descended to us from these Roman invaders, and from the Church chronicles of the time; but it is very doubtful if any of the European preparations could compare at all favorably with those in use in the Orient. Nevertheless, this evidence of Eastern pharmaceutical skill was not thrown open to the world until the return of the Crusaders.

Hugo di Lucca, and his son Theodoric, returning from the Crusades, brought complete formulae for the preparation and administration of hemp, opium, and several other famous narcotics, and urged the physicians of Paris to adopt them.

Strangely enough, the means of obtaining insensibility to pain became widespread amongst the executioners and malefactors, who, in turn, spread their knowledge throughout the ignorant classes. It is recorded that several of the public executioners were able to retire with immense fortunes, derived from the sale of these secret remedies to the poor unfortunates condemned to the Torture Chamber. The indifference of the Universities of Europe to these drugs is almost beyond our comprehension, but the fact remains, that the Orient alone favored their extensive use in surgery.

Guy de Chauliac (1300-1370) offered to administer a narcotic to a reigning king of Europe, for the removal of a cancerous growth. His bishop, with the characteristic attitude of the Church towards science in mediaeval times, dissuaded him with a specious argument that, since this relief came from the Orient, it must of necessity be diabolical, and the Devil, therefore, in all probability, would seize his soul while it was absent from his body in this pernicious "dream sleep"! The ecclesiastic maintained that faith, prayers, and fasting were more efficacious than a pagan drug, and urged him to emulate the saints and martyrs in their capacity for the endurance of suffering. The king chose to undergo the ordeal without the anesthetic, much to the chagrin of de Chauliac.

Meisner mentions a secret remedy which Weiss used in the Seventeenth century on August second, King of Poland, producing such perfect insensibility to pain that a leg was amputated without his knowledge. Weiss attempted to keep his remedy secret, since he dreaded ecclesiastical interference, but it is quite apparent, from contemporaneous writings, that he used both Indian hemp and opium.

The archives of the Borgias are replete with suggestions of many subtle potions that could

be used to produce surgical anesthesia, but which, unfortunately, were all too frequently employed as secret poisons against political enemies, as we have all learned in history.

Arnott, of London, was accustomed to place his patients in an alcoholic stupor, and some of his pupils produced insensibility by excessive bleeding to the point of exhaustion. In cases of amputation, he applied a freezing mixture of ice and salt directly on the part to be cut, according to the practice of Larrey, Napoleon's private physician, who discovered the benumbing effect of the intense cold upon wounded soldiers, in the Russian campaign.

Mesmer, reviving the traditions of Pagan days, entered Paris in 1776, and began initiating Europeans into the mysteries of what he designated as "Animal Magnetism," but which his ardent partisans soon termed "Mesmerism."

Whether mesmerism is really the introduction into the patient of a vital fluid, or "current," flowing through the operator as a medium, or whether it is merely a phase of self-induced hypnosis on the part of the patient, are, perhaps, questions of great technical import to the psychologist. The general practitioner is interested more in the results themselves.

Mesmer was not entirely a fraud. Primarily he produced the deepest states of insensibility by very simple means, but, as a wandering physician, he had learned the nature of the ignorant rabble thoroughly. He realized, instinctively, that his methods were too simple to hold the admiration of any crowd more than temporarily. He decided that his ultimate results could not be affected by preparing a more impressive environment for his operations. Hence we soon witness all the ludicrous paraphernalia which he assembled at his headquarters in Paris. At first, he worked in a small quiet room furnished with nothing but two chairs and a table, but, within a year, these same rooms were hung with black velvet embroidered in cabalistic designs, and he himself donned the garb of an Oriental mystic. Running water will hypnotize some people, so he utilized his knowledge of this fact by having a fountain erected in the middle of this room. He placed a simple magnet in the bottom of this fountain, and directed his patients to gaze at this object through the flowing waters. The people sought him in such vast numbers that the streets were blocked, and traffic suspended, in the vicinity of his residence. He, thereupon, stretched wires from his fountain out through the doors and windows. Those who were unable to gain an en-

trance to his office, were magnetized by holding these wires.

His enemies, at this juncture, induced the authorities of Paris to condemn Mesmer as a public nuisance. In response to their indictment, he showed the results of his "Magnetism," and pointed to the long list of operations that had been successfully performed while patients were insensible under his mysterious influence.

Maria Theresa had condemned him as a quack in 1760, and, without even the formality of an impartial investigation, had driven him from the city of Vienna with less than the usual "twenty-four hour notice." The French government, being disposed to act with greater justice, chose a committee of investigators, amongst whom were the great Lavoisier, our own Benjamin Franklin, acting as Chairman, and others equally prominent.

Had Mesmer not surrounded himself with so many superfluous incidentals, this committee would, doubtless, have done him greater honor. As matters stood, however, his "cures" were so mingled with jugglery, superstition, and vulgar stage-trappings, that these men of science concluded that Mesmer, and his methods, were a stupendous fraud.

Franklin, alone, seemed to realize that there was really an element of great psychic import buried beneath a mass of rubbish, and, whilst he deplored the charlatanic methods, into which Mesmer had sunk, he alone refused to condemn the underlying reality of the phenomenon itself. He concluded that the morbid desire of Mesmer's adherents for the mysterious sensations of magnetism, might, possibly, do permanent mental injury, but suggested that honest physicians ought to investigate the matter thoroughly, and make practical use of its anesthetic stage for surgical operations.

The Hindu devotees, for countless ages, have been accustomed to place themselves in a trance by many methods that we now classify under the generic term "Auto-hypnosis." Some of the favorite devices were: gazing unwinkingly at stars, or at some point selected in the landscape; repeating the sacred syllable "Aum" a countless number of times, until the brain was benumbed into insensibility. It is not at all improbable, in lieu of our present knowledge of hypnotic influence, that the famous Oracle of Apollo, with its mysterious and inarticulate utterance, may have produced insensibility in those who approached it.

The monotonous repetition of two or three musical intervals will, in some individuals, pro-



duce hypnosis. The Hungarian Gypsies use a musical phrase for this purpose which, curiously enough, is identical with the one recorded in the temples of Egypt and India for centuries.

These wandering Gypsies were often very skilled physicians, and, throughout Hungary and Bohemia, were very popular because they could perform the most serious operations with wonderful success, and, what is more—as is recorded in the chronicles of the famous Esterhazy family—"they could do it painlessly, having placed their patients in the deep sleep of insensibility."

Athanasius Kircher (1602-1680), the versatile Jesuit priest, famous as a mathematician, physicist, optician, Orientalist and musician, in addition to having achieved distinction by being the first to employ a crude microscope in investigating the causes of diseases, published a volume containing the results of his own experiments in magnetism. This work, "*Magnesive de Arte Magnetica*," appeared in 1643. Just before his death, in 1680, he published his last contribution to the annals of medical literature: "*Physiologia Kircheriana*," wherein he described still further results with hypnotism.

Mesmer spent several months in the Abbey of Fulda, where he had uninterrupted access to Kircher's manuscripts. He may have acquired his mysterious art from this source. Another plausible theory is that the wandering Gypsies of Bohemia, already mentioned, brought their knowledge from the Orient, and that Mesmer received it from them.

Benjamin Franklin had urged a more scientific study and application of Mesmerism, but, with the remarkable exceptions of Elliotson and Esdaile, few physicians made serious attempts to employ hypnotism in surgery.

John Elliotson lost his position as a professor in the University of London, in 1843, for steadfastly advocating, and using, hypnotism as an anesthetic, and for publishing a pamphlet entitled: "*Numerous Cases of Surgical Operation without Pain, in the Mesmeric State*." He continued the use of Mesmerism in his private practice: held séances in his own home; edited a magazine, "*The Zoist*," devoted exclusively to this subject; and in 1849 founded a Mesmeric Hospital, in which he successfully operated, occasionally under hypnotic anesthesia, until his death in 1868.

James Esdaile of Scotland, had an even more impressive record. Sent to India in 1846, as a physician in the Indian service, he used Mesmerism in the performance of over two hundred

and sixty painless operations, which he has described in his book "*Mesmerism in India in 1846*."

These operations range in importance from hydrocele and elephantiasis, which are of unusual frequency throughout India, and the extraction of teeth, to the removal of cancers from the breast, rectum and cheek, cataracts and amputations of every variety. One of the last of his cases was that of a native shop-keeper afflicted with such a monstrous scrotal tumor that he had been able to do little more than sit on a chair, for many years. Esdaile relates that this Hindu had become accustomed to use his protuberance as a writing desk and table, but its increasing size finally prevented even this convenient practice! It required four days to place him in the mesmeric coma, but he finally succumbed, and, in the presence of many interested witnesses, Esdaile removed the tumor, which weighed over eighty pounds. The rush of venous blood was unusually severe, but was finally arrested, and all vessels tied. The exhaustion from this loss of blood was the only untoward symptom, but he made an uneventful recovery.

Esdaile, upon returning to Scotland, was determined to continue his surgical activities under the conditions he had found so favorable in Bengal. He finally concluded, as the result of innumerable experiments, that, with rare exceptions, the European differs markedly from the introspective Hindus, in being less readily susceptible to hypnotic influence.

Charcot taught that hypnosis was essentially a morbid manifestation of hysteria, and hysterio-epilepsy, a theory which limited his own progress, and the extensive use of this agent in disorders other than those of a neuropathic character. Many surgeons were mentally prepared to accept hypnotism, but were prevented by the fact that they seemed personally unable to produce any of its stages of coma on their own patients. Bernheim was struggling with this aspect of the problem, when an incident occurred which practically relegated hypnotism to the store-house of defunct therapeutic agents forever.

The greatest geniuses in the medical profession were fast becoming confirmed skeptics concerning the possibility of "absolute anesthesia:" the faculty of the Sorbonne declared it a wild fantasy, to be classed only with "perpetual motion," and the "elixir of youth"! Velpeau, the greatest French physician of his day, as late as 1839, says: "To escape pain in surgical

operations, is a chimera which we are not permitted to look for in our day."

At this juncture occurred an event, so momentous in importance, so far-reaching in its possibilities, that it should stand forth in history as a distinct achievement in human advancement: the discovery of ether by Morton, seventy years ago last October, for Morton had the temerity, in his investigations, to develop ether to the point of its real usefulness. There is no doubt that ignorance and fear, as well as popular prejudice, had restrained Wells, Jackson, and Long from projecting their experiments further than the so-called "ether frolics," which had been in vogue at Cambridge, and elsewhere, for several years. Morton, however, gave ether its scientific application, and forced mankind to listen to him.

It is of interest to note the eagerness with which the various aspirants vie with each other for the honor of obtaining practical success in the use of ether. Wells, of nitrous oxide fame, following the teachings of Sir Humphrey Davey in 1799, and Jackson of Harvard, a geologist and mineralogist well known abroad, having experimented extensively in general science, magnetism and electricity, as well as having discovered and opened copper and iron mines of our own Upper Peninsula, were much agitated by Morton's experiments, and both claimed priority of discovery. Jackson even visited Europe, presenting his claims to various scientific organizations, and the French Institute actually recognized him as the "discoverer of modern anesthesia."

A select committee of our House of Representatives, to whom Congress referred the matter in 1854, announced a series of conclusions denouncing all claims but those of Morton. Here again Fate sports, for, whether or not as a result of this controversy, Wells suicided in a prison cell in the city of New York in 1843, and Jackson died in an insane asylum in 1880.

It is unfortunate that Morton allowed cupidity to surpass ethical considerations. He obtained an English patent on his discovery, under the name of "Letheon," and sold office rights to dentists; but the medical profession, then, as today, antagonistic to patents, as subversive of best results, opposed him. Morton's attempt to introduce it in the Mexican war was frustrated by the United States Surgeon General, on the pretext that its highly volatile character could not withstand the rough usage on the field of battle.

Morton's subsequent history was a series of

disappointments. He besought the government, not only personally, but through the influence of congressional friends, to render him deserving honors and financial reward, but, after the exhaustion of his energies, his means, and his time, in the effort to acquire pecuniary recognition of his discovery, he died in a condition of temporary aberration, in 1876.

Today the world universally recognizes that he first demonstrated the safety of ether as the reliable and efficient anesthetic, and on his monument in Mount Auburn cemetery, Boston, is inscribed this terse but inspiring sentiment:

"Inventor and revealer of anesthetic inhalation; before whom, in all time, surgery was agony; by whom, pain in surgery was averted and annulled; since whom, science has had control of pain."

In considering this great American contribution to science, it is opportune to recall the fact that the noun "anesthesia," and the adjective "anesthetic," were both evolved from the brain of another American, Dr. Oliver Wendell Holmes. He proposed the use of both these terms to Morton in a letter which is still preserved. He advocates their use with his characteristic modesty; advises Dr. Morton to consult others before adopting them; but adds that he believes them very apt for their purpose.

One year later, the synthetic preparation known as "chloroform" was introduced to the profession by Sir James Y. Simpson, of Edinburgh. Several individual observations were favorable to the compound in preceding years, but were never given public notice until Simpson, her Majesty's physician in Scotland, and particularly famous in midwifery and gynecology, recognizing the great value of ether in child-birth, sought a substitute of less odor and unpleasant after-effects. He isolated the active principle "chloric ether," or chloroform, with which he experimented, and, on November 4, 1847, proved its anesthetic properties.

A few days later a public test was to have been made at the Royal Infirmary, but Simpson being unavoidably absent, the patient was operated upon without it, and died during the operation. Had this death occurred under the administration of chloroform, it is certain that another great advance in science would have received its death blow. Fortunately, the public test did not occur until two days later, and with most successful issue. The new anesthetic became immediately popular in obstetric practice, but here again we meet that fanatic spirit, relic of the dark ages, and still characteristic



of the Scotch clergy, the pulpit attacking Simpson most vehemently as a violator of the moral law. For, is it not ordained in Scripture, "in sorrow shalt thou bring forth children"? Simpson, however, rose to the occasion, and using their own Biblical weapons, called their attention to Eve's creation, reminding them that when Eve was formed from the rib of Adam, the Lord "caused a deep sleep to fall upon Adam." This was the knock-out blow to the superstitious clergy, and it was permanently silenced.

That Simpson received due recognition for his services to humanity, not only from his own government, but the public at large, is attested by the fact that at his death, in 1870, his body was deposited in Westminster Abbey. There, on his bust are inscribed these words:

"To whose genius and beneficence the world owes the blessings derived from the use of chloroform for the relief of suffering."

Aside from nitrous-oxide gas, belonging now, principally, to the offices of dentists, the bichloride of methylene, and the bromide of ethyl, comparatively unimportant, cocaine, so universally used, and its discoverer Koller, should be mentioned here.

For many centuries, the leaves of the coca tree have been chewed, or rubbed on the gums, by the natives of Peru, to postpone the sensation of fatigue. Peruvian laborers carry, today, a supply of these leaves in a leather pouch, and work is abandoned four times a day to "chew the coca." A species of snuff is prepared from the same source by drying the leaves, and grinding them to a fine powder. This snuff is in universal use by the whole population, and Koller by modern chemical analysis, revealed the interesting fact that the active principle in these leaves is cocaine.

Mozans, the author of a most interesting volume, "Along the Andes and Down the Amazon," cites the case of an habitual chewer of coca leaves, who was run over by a train. He experienced no pain, although his foot was cut off by the accident.

Cortez found that the inhabitants of ancient Mexico submitted to the most severe surgical operations, in a state of total unconsciousness, after imbibing potions prepared in the native temples for that purpose. Cortez, being a warrior rather than a scholar, left no writings except five letters to his sovereign, Charles Fifth of Spain. In one of these he describes two herbs with properties similar to our henbane

and stramonium, and, in addition, states that he repeatedly witnessed trephining by the native doctors, after the patient had been rendered insensible with a preparation from the cocoa leaves.

Koller reported to a Congress of German oculists at Heidelberg in 1884, his experiments upon lower animals with this active constituent of coca leaves, with the result that, within a few weeks, it was international in its use, and has today an assured, and important, place among anesthetic agents. Other related alkaloids, as eucaine and holocaine, products of synthetic origin, deserve but passing mention. Notwithstanding some of the disagreeable possibilities latent in cocaine, a very large percentage of the civilized world has been relieved of much pain by its local use, and to Koller humanity owes a great debt of gratitude.

In conclusion, I beg your indulgence for a moment, to speak of some personal impressions and reflections of a few years ago—which possibly have been shared by some of the profession present—when it was my pleasure to look upon the bust of that great benefactor, Simpson, in Westminster Abbey, occupying, as it does, its modest niche amidst many other memorials to Scientists and Litterateurs, and, a few days later, to visit the tomb of the great Napoleon. There, under the brilliant dome of the Hotel des Invalides, as I gazed down upon the grandeur and magnificence of that monstrous single block of granite, surrounded by the standards and captured battle-flags of his defeated hosts, a regal sarcophagus, containing the dust of the greatest conqueror in history, I could but contrast the deeds of the two.

Whether, or not, the life of that incomparable military genius was an evolutionary factor in human progress, one can but compare the liberation of millions from suffering, and the consequent happiness brought to innumerable families, by the one, with the untold murder, and misery, and anguish of multitudes wrought by the other. The truth unfortunately obtains, however, that the greatest honors and rewards have been paid to the *destroyers* of our race, *never* to its saviors and protectors.

Although the discoveries of Lister, Morton, Simpson, and many others of our profession, have saved immeasurably more lives than have been lost through war's destructive forces, they illuminate history with far less lustre, a sad commentary, indeed, on human intelligence, and our vaunted *Christian* civilization.

## THE RADIAL CHOLESTERIN STONE IN GALL BLADDER SURGERY.

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Cholesterinemia has of late developed considerable discussion and many reports. These deal chiefly with infections and metabolic conditions relating to gall-stone formations and their treatment.

According to Naunyn's law two factors must be present for the formation of gall-stones, viz: stagnation and infection. This law has long been accepted.

Aschoff more recently demonstrated that stones of a characteristic type (the radial cholesterin stones) are found in gall bladders in which there has never been infection, either acute or chronic, but simply stagnation.

For a long time it has been recognized clinically that a history of gall-stones may often be traced to pregnancy and typhoid infection. This occurrence in pregnancy has never been satisfactorily explained, in that only mechanical reasons were advanced, such as bile stagnation caused by direct pressure from below. Lately another reason, which may be equally as important as stagnation, has been found in the discovery that the cholesterin content of the blood is increased during pregnancy. It has been shown recently that there is also an increased amount of cholesterin in the blood in typhoid fever.

Much interest has been displayed in the origin of cholesterin, and controversies well worth reading have arisen on this theme, but in this paper we are less interested in the origin than in the resulting gall-stones, especially the so-called pure cholesterin stone, or more correctly termed radial cholesterin stone. They were called pure cholesterin stones before it was discovered that the brownish color in the center consisted of a trace of bile pigment and calcium. They are, therefore, not 100 per cent. pure but nearly so.

The radial cholesterin stones, in the pre-infectious period, occur singly, are round or oval, and usually lie in the beginning of the cystic duct. They may vary in size from that of a pea to a nutmeg. When moist they present a crystalline lustre ranging in color from clear white to light yellow. The surface is slightly roughened by projections corresponding to the trabeculae which radiate from the center to the surface, as may be noted in the cross-section of figures in Plate 1. The general structure of the stone indicates that it is

the result of simple crystallization, growth having advanced through the apposition of new crystals at the end of the trabeculae. This is substantiated by leading mineralogists.

These stones, therefore, are quite different both in composition and structure from the stones commonly found in infected gall bladders which, it will be remembered, are either arranged in layers or merged into an amorphous

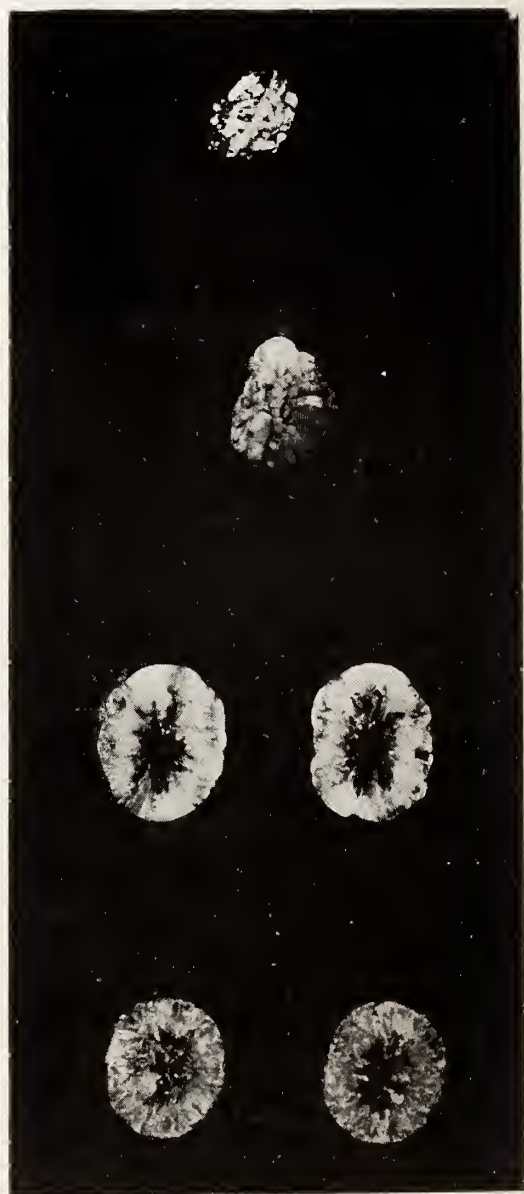


Plate I.

mass. Since stones of this type occur in non-infected gall bladders they rarely produce symptoms, and for this reason are found more frequently by the prosector than by the surgeon. Aschoff goes so far as to say that they never produce symptoms. I cannot disprove his claim but I am inclined to doubt it. A case recently came under our observation with a history of gall-stone attacks. At operation a single radial



cholesterin stone was found in a gall bladder which macroscopically appeared normal. The bile also appeared normal. A cholecystostomy was done, therefore a microscopic examination was not made, so I cannot be sure that there was no infection present; however, it would seem reasonable to suppose that the presence of a stone (foreign body) might produce sufficient irritation to excite the gall bladder to attempt to expel it, with resulting attacks of gall-stone colic. I would like to see this point settled more definitely.

The probability is that in themselves they rarely produce symptoms, yet they predispose

1). The gall bladders, from which these stones were removed showed recent inflammatory changes. The stone represented in Figure 4 (Plate 1) was found at autopsy several years ago. At that time we were not particularly interested in this subject, therefore, the gall



Plate II.

to infection by virtue of interfering with the drainage of the gall bladder. In the event of infection, calcium is formed in varying quantities, and may either be deposited on the radial cholesterin stone, soon concealing its identity, or new mixed stones may be formed; so that, then, there may be one radial cholesterin stone plus one or many mixed stones.

If the patient is operated upon soon after the onset of gall bladder symptoms, say in the first attack, before an excess of calcium has been thrown out by the inflamed mucosa, characteristic radial cholesterin stones may be found, as shown in Figures 1, 2 and 3 (Plate



Plate III.

bladder was not examined, however, macroscopically it appeared normal.

The figures shown on Plate II represent radial cholesterin stones, covered with a coat of bile pigment and calcium in varying degrees of thickness. In Figure 1 there is only a thin film, whereas in Figure 3 the radial stone is

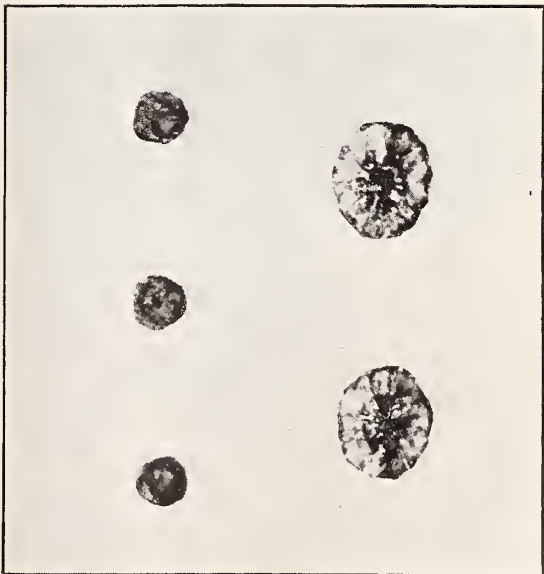


Plate IV.

so imbedded that it forms a mere core. The cross-section of this stone illustrates well the radial arrangement of the pure cholesterin stone covered by Bilernbin-calcium which is arranged in layers.

Plate III shows a small radial cholesterin

stone which formed the core of an enormous stone (the latter illustrated in the broken parts). This stone was removed at operation from the ilium, near the ilio-cecal valve where it was causing obstruction of the bowel.

Plates IV and V each show a radial cholesterol stone plus mixed stones. The radial stone shown in Plate V occupied the beginning of the cystic duct (as is the rule), and was capped by the large stone which filled the gall bladder with the exception of the space occupied by the smaller mixed stone.



Plate V.

According to Aschoff, the radial stones illustrated in Plates II, III, IV and V, existed in two periods, one of noninfection, without causing symptoms, and the other in the presence of infection with symptoms. Moreover, he claims that the single radial stone precedes the ordinary mixed stones in 50 per cent. of cases.

In our experience the percentage is not so high. However, we were surprised at its frequency upon examining our specimens. Nearly all single stones will prove, upon splitting, to have a radial stone center. In the case of multiple stones considerable search may be necessary as every stone may have to be split. Such a procedure is, of course, practically impossible when they are small and the number is very large.

I am sure that if the "splitting" test were carried out routinely, the frequent finding of a radial cholesterol stone would surprise most surgeons.

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### INTESTINAL TOXEMIA AND INTES- TINAL STASIS.\*

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Intestinal toxemia is a form of blood poisoning induced by the absorption of toxins or micro-organisms from a damaged intestinal mucous membrane. Any delay in the passage of the intestinal contents through the various segments of the intestinal tract exposes the patient to the danger of intestinal toxemia. The fault is digestive—some disturbance, more or less severe and more or less prolonged, of the digestive processes. Of course digestion is in the main due to enzymes, but a small part of it is accomplished by bacteria; certain parts of the food which resist the action of enzymes would not be digested at all were it not for the micro-organisms in the intestine. On the other hand it should not be overlooked that the work of the intestinal bacteria is associated with the production of toxins against which normally the organism must protect itself. The decomposition products of bacterial activity are not all toxic, but in large amount they may have a decidedly toxic effect. Should the protective agencies of the organism, such as the neutralizing effect of the digestive juices upon the toxins, the antitoxic power of the hepatic cells, the detoxicating effect of the internal secretions (thymus, thyroid, adrenals) and of the epithelium, the excretion of intestinal toxins by way of the expiratory air, the urine and the feces—should these, for any reason, fail to act or act inadequately, intestinal toxemia would result. Bacteria and their toxins are believed to pass through the damaged mucous membrane into the wall of the intestine and induce inflammation, with the formation of pericolic membranes, though no conclusive proof has yet been adduced to substantiate this view.

The term "chronic intestinal stasis" as employed by Lane indicates such abnormal delay in the passage of the intestinal contents through a portion or portions of the gastro-intestinal tract as to result in the absorption into the circulation of a greater quantity of toxic or

\*Read before the Michigan State Medical Society.



poisonous materials than can be disposed of by the liver or other protective organs. He believes this condition is due to the upright position of the trunk, which induces a prolapse of the viscera and consequent faulty drainage. To resist this displacement, nature reduplicates certain peritoneal tissues, which become firmer and firmer until distinct bands are formed. As a consequence, under unusual or prolonged tension, kinking occurs. The kinks occur at the duodeno-jejunal juncture, the terminus of the ileum, in the cecal region, at the hepatic flexure, the splenic flexure, and the colon-sigmoid juncture.

The factors which contribute to the development of intestinal toxemia are manifold. Even when the condition of the digestive juices is entirely normal, frequent, large and albuminous meals may be abnormally decomposed. This danger is increased if there are secretory and motor disturbances of the stomach or intestine, as in achylia, gastric dilatation, pyloric stenosis, gastroenteroptosis with kinks, constipation, catarrh of the small and large intestine, dilatation of the colon, intestinal stenosis, chronic appendicitis, and parasites. In these cases, nutriment of normal quality in normal quantity may work harm. A further factor may be supplied by the weakening of the defenses of the organism, through infectious diseases, affections of the intestinal mucosa, hepatic insufficiency, anemia, or alcohol.

Even in normal digestion aromatic substances and ptomaine are formed in the intestine, owing to the action of the bacteria upon the proteins. These substances are partly excreted in defecation. If their quantity increases, consequent diarrhea will hasten their expulsion. The residue will be neutralized by the mucosa, assimilated, passed through the liver, and taken up into the circulation, where it will be definitely decomposed by the action of the internal secretions. The end products will then be excreted through the skin, the lungs, and the kidneys. If, then, these products of normal digestion are toxic, the decomposition products of abnormal digestive processes must be so to a much greater extent. The most toxic products are always formed from the proteins, and it is these above all that cause intestinal toxemia.

In the breaking up of protein by the putrefactive process, a number of substances which have a toxic and injurious effect upon the body are produced, and these are absorbed from the intestine. They all belong to what is technically known as "the aromatic series." The best known

of these are skatol, indol, and phenol. These aromatic products of intestinal putrefaction have much to do with the production of pericolic membranes, bands and adhesions found in cases of chronic intestinal stasis. They are carried to the liver, where they combine with sulphuric acid, and are excreted in the urine as ethereal sulphates. An excess of ethereal sulphates in the urine becomes thus the measure and gauge of the degree of existing intestinal putrefaction. Indican in the urine has the same significance. The indol is rapidly absorbed from the intestinal tract and carried by the portal blood to the liver, where it enters into loose combination with the liver cells; from this combination it is readily detached, to become united with sulphuric acid; before becoming thus united, however, it is oxidized into indoxyl so that, when united, it becomes chemically a potassium salt known as indoxyl sulphate of potassium. This substance is much less toxic than indol, finds its way into the blood, and is promptly excreted in the urine as indican. In early life the production of indol in the intestine is in general very slight; and there are some older persons also who, even while suffering from disorders of digestion, do not form indol. On the other hand, the production of considerable quantities of indol in the large intestine is a feature of many cases of intestinal putrefaction, and in some cases the quantity formed is large. That indol may be absorbed in considerable amounts is shown by the appearance of large quantities of indican in the urine of persons in whom the intestine contains large amounts of indol (Herter).

We cannot, however, depend upon the presence of indican alone in the diagnosis of intestinal toxemia. Indican in increased quantities is usually present in the urine in acute and chronic gastritis, acute and chronic peritonitis, typhoid fever, dysentery, ileus, carcinoma, cholera, Addison's disease, diseases of the central nervous system, empyema, gangrene of the lung, and all conditions where protein putrefaction is in progress. The findings of indican in the urine is not of itself sufficient to establish the diagnosis, but it has some value in connection with the other signs of intestinal toxemia.

Intestinal toxemia is possible without indican and with a perfectly healthy pancreas, or at least with one so judged to be by the complete digestion of nuclear tissue. Those who believe that there can be no intestinal toxemia without indican in the urine will overlook many cases.

Cholin forms the base of the lecithins which are abundantly present in various animal structures, but is in itself innocuous; it can, however, by the action of bacteria, be transformed into neurin, which is a highly toxic substance. Cadavarin and putrescin are bases and products of protein decomposition.

The external appearance of the patient may be the first indication of the presence of intestinal toxemia. The patient has a sickly expression, a pale yellowish complexion and a morose disposition; forehead and cheeks are prematurely wrinkled and have brownish spots; the lips in comparison with the pale complexion are very hyperemic and swollen. The skin is dry and scaly, the nails soft and fissured. The lumbar glands are very painful and enlarged. At night there is a tendency to perspiration.

There are also digestive symptoms, such as anorexia, dislike of meat, and great thirst. The tongue has a brownish coat, the abdomen is distended, and sometimes the liver is enlarged, especially in children. The state of the digestive organs differs in different individuals, depending upon the presence of ptosis, catarrhs, fermentation, putrefaction, constipation, enteritis membranacea, and parasites. The intestinal flora, also, displays characteristic signs: there is a decrease of the aerobic and facultative anaerobic bacteria and a predominance of the facultative and strict anaerobes (*Bacillus mesentericus proteus*, *putrificus*, *putridus*), which means a flora of protein putrefaction.

The so-called gastro-intestinal crises may occur in which the accumulated enterotoxins are suddenly excreted: these cases are characterized by salivation, periodic vomiting, and periodic diarrhea. The other organs likewise suffer from the influence of the intestinal toxins. There may be cholangitis, severe icterus, and cardiac manifestations such as angina, tachycardia, bradycardia, arrhythmia, cardialgia, neuroses, and lowering of the blood pressure. The lungs may be involved in the form of asthma and bronchitis. Inflammation of the tonsils is of frequent occurrence. The nervous system is responsible for headache, migraine, hyperchlordria, and mental derangement. Anemia, even in the pernicious form, is not very uncommon. Urine and feces show the signs of increased protein putrefaction in the intestine.

Considering that intestinal toxemia may, on the one hand, be the consequence of increased protein putrefaction in the intestine, and on the other the consequence of insufficiency of

the antitoxic action of the various defensive organs on the normal decomposition processes, it follows that the therapy must be twofold, with the object of decreasing the intestinal protein putrefaction to normal or below, and increasing the function of the antitoxic and excretory organs.

In the treatment of intestinal toxemia, the intestinal culture ground on which the bacteria of protein putrefaction thrive should be changed. This is accomplished:

- (1) By an antiseptic diet.
- (2) By introducing antagonistic bacteria into the canal.
- (3) By antiseptic medication.

(1) In order to change the culture ground of the noxious bacteria in the intestine, it is necessary to restrict or exclude among the natural foodstuffs those which favor the development of the putrefactive bacteria, and to prescribe an abundance of those which counteract putrefaction. The foods favoring putrefaction are those that contain protein: meat, fish, eggs, and the flour of lentils, peas and beans. Meat especially increases intestinal putrefaction; the less fresh the meat, the stronger the decomposition. Fish invites putrefaction; egg albumin is less susceptible, but the legumes greatly augment the process. It has also been found that fat given with the food increases protein putrefaction in the intestine.

The antiseptic diet in intestinal toxemia should consist of farinaceous and milk dishes, since milk in all forms, as well as the carbohydrates (with the exception of legumes), inhibits putrefaction. Milk is an antiseptic food, owing to its high percentage of milk-sugar, which liberates lactic acid and succinic acid through the action in the small intestine of the *Bacillus coli communis* and the *Bacillus lactis aerogenes*. These acids are capable of preventing the anaerobic bacteria of putrefaction in the large intestine from decomposing the casein of milk and the protein of nitrogenous foods. But pure milk alone is often not well tolerated, and it is therefore advisable to use this article of diet in the form of salicylic milk or as milk soup thickened with flour or other material. The same precaution should be taken with skim milk.

A much greater effect on putrefaction is exerted by the various products of sour milk. The following may be mentioned:

Whey (the clear, transparent liquid residue expressed from milk curd coagulated with rennet or pepsin) is much used as a hygienic bev-



erage and a dietetic remedy. Indeed, special establishments have been erected for "whey cures" in Baden-Baden, Creutznach, Levico, Meran and Weisbaden. In the beginning of the treatment whey is sometimes difficult to digest, but the intestine soon becomes accustomed to it. It may first be taken mixed with mineral water, but later undiluted, gradually increasing the daily quantity. It should preferably be taken on an empty stomach. Whey can also be used to advantage in the preparation of soups.

Buttermilk, owing to its small protein and fat content and its high percentage of milk-sugar and lactic acid, is well suited to the treatment of intestinal toxemia.

Sour milk is much better tolerated than fresh milk, because it does not coagulate in the stomach and thus interfere with digestion. It slightly stimulates peristalsis and diuresis. Fresh cheese, made from either milk or cream, is recommended. Koumiss and kefir are products of the alcoholic fermentation of milk and are beneficial.

Aside from milk, carbohydrates are recognized as the best antiseptic foodstuffs. Among these the best results are obtained with the various kinds of flour and the baked foods made from them, because, owing to their tardy absorption, they reach the lower parts of the intestine, where they gradually liberate their antiseptic lactic and succinic acids. For this reason it is wise to ingest with every protein meal a large quantity of farinaceous food.

In intestinal toxemia protein foodstuffs should be restricted or entirely excluded. The best article among them is eggs. As to fats, fresh fat which comes with the meat should be avoided, while fresh butter is allowed. Farinaceous food and milk products are to be given in large quantities. Thorough mastication is, of course, absolutely necessary. No beverages should be taken with the meals. It is advisable to arrange the daily meals so that food and drink are taken alternately and not simultaneously. After every meal an hour's rest should be taken in the dorsal or right decubital position, without sleeping.

In regard to protein in particular, care should be taken to avoid those that constitute culture grounds for the protein bacteria. These are: bouillon, fatty soups, roast-meat gravy, meat jelly, meat extract, tainted meat, and any meat which is easily decomposable.

In serious cases of intestinal toxemia meat should be absolutely forbidden, while in all

cases those that contain much purin should be considerably restricted. The same is true of the legumes.

In regard to farinaceous food, raw or cooked fruit and vegetables, all carefully masticated, may be taken, provided there is no enteritis, while in the presence of considerable intestinal irritation (enteritis, spastic constipation) these coarser articles of diet should be entirely forbidden. The antiseptic effect of huckleberries is entitled to special mention.

(2) The bacteria causing intestinal putrefaction can be attacked not only by dietary measures, but also in a direct way by introducing antagonistic bacteria into the intestine. For this purpose the lactic-acid forming bacteria or the oriental Bulgarian bacillus are available. The proteolytic bacteria may produce their harmful effects in either the small or large intestine; in the former case the introduction of organisms of the Bulgarian type may reasonably be expected to be of benefit, since they tend to localize themselves in the small intestine. If, however, the proteolytic process originates in the large intestine, the common lactic acid bacilli are indicated.

While the primary object of introducing lactic acid bacilli is to inhibit the objectionable activity of proteolytic organisms, it is possible that, in addition to the formation of lactic acid, other products associated with their development may be formed which also act beneficially.

(3) The putrefactive bacteria of the intestine may further be attacked by antiseptic medication. There is no antiseptic strong enough, in doses which would be safe, to destroy the viability of the bacteria in a quantity of fluid equal to that contained in the bowel. For such an effect, Horatio C. Wood states that it would require about 30 Gm. (one ounce) of phenol or 0.3 Gm. (5 grains) of corrosive sublimate.

According to Combe, the principal intestinal antiseptics are: hydrochloric acid: menthol, 2 Gm. (30 grains) a day; bismuth salicylate, 0.6 Gm. (10 grains) three times a day; and ichthyol. The last named remedy, in the opinion of Rodari, is not sufficiently appreciated as an intestinal antiseptic. It is necessary to prescribe it in large doses. Ichthyol should be given in capsules, each containing 0.1 Gm. (2 grains). Rodari gives two such capsules every two hours. This may produce slight stomach symptoms and eructations.

Calomel, resorcinol, creosote and salicylic acid may also be mentioned in this connection.

Putrefactive bacteria can further be unfav-

orably influenced by the administration of laxatives and intestinal irrigations. The principal laxatives available are castor oil, calomel and the salines. Intestinal irrigation is indicated in stasis with intestinal toxemia. Irrigations with 1 per cent. ichthyol are efficacious. Fleiner's oil enemata has given me better results than any other method of treatment.

In the stimulation of the antitoxic organs, the most important point is to keep the kidneys acting freely so as to hasten elimination. This is best effected by rectal irrigations with physiologic salt solution or by intravenous transfusions.

Many cases of chronic intestinal stasis and toxemia recover completely when the accompanying constipation is properly treated. It is of the utmost importance to decide whether the constipation is of the atonic or the spastic type. The differentiation is not always easy. Patients suffering from spastic constipation are vagotonic. This can be easily recognized by the positive oculo-cardiac reflex, by Herring's phenomenon, and by the pilocarpin test.

Spastic constipation is due to constriction or spasm of a few isolated loops of the intestine, readily demonstrable by the Roentgen ray. The fluoroscope will also show the relaxing effect of a hypodermic of atropin upon the spasm. The enterospasm may be painful or not; in the former cases it is due to neuropathic conditions associated with disease of the abdominal viscera or pelvic organs.

The aim of the treatment of the atonic variety of constipation must be to so improve the muscular condition by dietetic measures as to finally attain regularity of defecation with a normal supply of food. The diet should be large and bulky, rich in insoluble residue, including an increased amount of carbohydrate, and more particularly of foods rich in cellulose.

In the treatment of the spastic variety of constipation, bulky foods are eliminated and a variety of fruits should be given because of their chemical constitution. They stimulate peristalsis, partly because of their fruit acids, and partly because they contain sugar, which tends to increase the fermentative processes in the intestine. Easily melted fats, as well as butter, oil and cream, not only have a mechanical effect, but also act chemically, stimulating peristalsis by means of the great amount of fatty acids they develop.

Petroleum jelly will lubricate the whole gastro-intestinal tract, thus facilitating the passage of the contents. The lubrication of the chyme

in the intestine assists in its timely removal in cases of intestinal stasis. After the due administration of this jelly the feces are softened and under the microscope are found to contain minute oil globules. Petroleum jelly of the best quality seems to act equally as well as the Russian mineral oil; it is heavier and therefore mixes more thoroughly with the feces; at the same time its viscosity prevents it from passing through the bowel too rapidly. The jelly, when pure, is not absorbed from the alimentary tract and even in large doses has no poisonous effect. It is useful not only as a lubricant, but also as a means of healing superficial lesions of the mucous membrane.

Duodenal lavage, one to four pints of water being introduced through the duodenal tube, as suggested by Jutte, will often give good results.

The mechanical treatment consists principally in the use of an abdominal bandage which will furnish a suitable support to the relaxed abdominal wall. This treatment acts beneficially by ameliorating the symptoms due to tension or stretching of the mesenteries.

Surgery is now frequently employed for the cure of intestinal toxemia associated with chronic intestinal stasis. A Roentgen-ray examination with the bismuth mixture may show a displaced stomach, a prolapsed colon, kinking of the hepatic or splenic flexures, spasms of different loops of the intestine, or the presence of bands, membranes and adhesions; but such conditions do not imply that surgery is inevitably necessary. So long as motility is not interfered with, there is no absolute indication for surgical intervention. A transverse colon can be displaced anywhere from its normal position down to the symphysis without interfering with motility. The cinematograph shows that such a displaced intestine can empty itself properly even if the angulations at the distal ileum and the hepatic and splenic flexures show absolute kinks. It has been proved that stasis is not due to an abnormal position of the intestine (kink, ptosis or redundant colon) so long as there is no actual mechanical obstruction.

Recent experimental work by Keith (1) explains the mechanism of intestinal movements, and seems to account for the production of intestinal stasis upon a physiologic basis. In his histologic studies he discovered a nodal tissue intermediate between nerve and muscle and interposed between Auerbach's myenteric plexus and the smooth muscle of the intestinal



wall. This intermediate tissue possesses two distinct functions: one, the initiation and regulation of the muscular contractions in the segment of the intestine which it controls; the other, the power of conducting impulses which lead to the forward propulsion of the intestinal contents. Not only do the demonstrable physiologic functions of these "nodes" explain the normal movements of the intestine, but it is obvious that a perversion of the function of any one of them is capable of giving rise to an inhibition of the forward progress of the intestinal contents, with resulting intestinal stasis. In the establishment of this as the physiologic explanation of the mechanism of the production of intestinal stasis, Keith was able to demonstrate the presence of definite fibrotic and degenerative changes in this nodal tissue in segments of the intestine extirpated for the relief of chronic intestinal stasis. From these investigations he concludes that it is improbable that mechanical conditions or derangements of sphincteric action underlie the production of intestinal stasis, but that the true cause is the production of some "block" or disorder in the nodal and conducting system of the intestine analogous to the heart block and other similar disturbances of cardiac function. He does not accept Lane's "drag, band and kink" theory.

By short-circuiting the ileac contents directly into the sigmoid or by the extirpation of the colon, Lane has succeeded in curing coincident pyorrhea alveolaris, tuberculosis, arthritis deformans, nephritis, cystitis, pyelitis, endometritis, salpingitis, exophthalmic goiter, skin disease, colitis, endocarditis, epilepsy, neurasthenia and a host of other diseases. An operation like that of colectomy is an extensive and dangerous one, and seems hardly justifiable in the treatment of such chronic joint diseases as arthritis deformans or the arthritis of tuberculosis. It is surprising and a bit confusing to hear of the cure of so many varied and unrelated diseases attributed to one remedial operation. The connection which is asserted between chronic intestinal stasis associated with intestinal toxemia and the many forms of ill-health which the short-circuiting operation is said to cure, is not convincing. In view of the radical treatment urged by the followers of Lane, and the confidence placed in its not yet entirely tested results, internists will do well to cultivate a sane conservatism. We are not warranted in encouraging surgeons to hazard the operation of

short-circuiting and colectomy unless we have a definite organic intestinal obstruction to deal with.

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### THE ADMINISTRATION OF SALVARSAN IN CONCENTRATED SOLUTION.

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Although much has, in the past year, been written on the subject of the administration of salvarsan in concentrated solution, only a small percentage, comparatively speaking, has as yet been administered in this manner.

In 1913 Dr. Paul Ravaut at the meeting of the Société de Dermatologie et de Syphilographie, held at Paris, described a new method of injecting neosalvarsan by means of a syringe. This was the result of a number of attempts to do away with the ill after-effects often following the administration of neosalvarsan, after-effects which Ravaut believed due to the oxidation of the drug during the slow process of intravenous infusion. In this connection he also observed that when saline solutions were used, the neosalvarsan was oxidized much more promptly than in pure water and that, the greater the percentage of salt present, the more prompt the oxidation of neosalvarsan. The use of considerable amounts of distilled water, on the other hand, appeared to him inadvisable because the solutions were then no longer isotonic and there was reason to fear the occurrence of hemolysis. He showed that solutions of neosalvarsan, as usually administered, when mixed in a test-tube with human blood invariably hemolyzed the latter. More concentrated solutions of neosalvarsan, however, i.e., 0.6 in 10 cubic centimeters distilled water never produced hemolysis.

There have been various modifications of Ravaut's method, as the use of boiled water in place of freshly distilled water or the use of freshly doubly distilled water but the principle is the same, namely the use of the drug in concentrated solution.

If it is distinctly to our advantage to use neosalvarsan in concentrated solution and since neosalvarsan, salvarsan and the new product diarsonal are similar in their chemical formulae, why should we not use the last two in concentrated solutions? Fehde was probably the

first to do this, having for several years, been in the habit of injecting 0.6 gm. of Salvarsan in 10 cubic centimeters water and injecting the same intravenously. His results though satisfactory were never published, but his example has been followed by many others with individual variations. Saalfeld of Berlin dissolves 0.3 gm. in 40 cubic centimeters saline solution, alkalizes it in the usual manner and injects it intravenously. During the past year and a half the writer has been using the concentrated solution of salvarsan, using 0.6 in 30 cubic centimeters fluid.

The process which we use in the preparation of a concentrated solution of salvarsan is as follows:

Into a sterile eight inch test tube about an inch in diameter we place 20 cubic centimeters of freshly distilled water (old distilled water is said to be unfit). This is raised to the boiling point to insure against any possible contamination and allowed to cool to about 140 degrees Fahrenheit, as too high a degree of heat is said to decompose the salvarsan. The contents of an ampule of salvarsan are then allowed to drop on the surface of the water, taking care not to allow any of it to touch the side of the tube because it adheres and it is difficult to get loose. Shake carefully until solution is effected. Before proceeding to precipitate the salvarsan care must be taken that it is all dissolved and that no translucent gelatinous masses of it are held in suspension. If this precaution is not taken serious difficulties will follow. The salvarsan having been completely dissolved, a sterile 15 per cent. solution of sodium hydroxide is added drop by drop. This solution is added in such a manner that it washes down the sides of the tube, and prevents adhesion of the precipitate formed, to the sides of the tube. Upon continuing the addition of the alkaline solution the precipitate first formed is gradually redissolved. This is a critical point in the process. There should be as little excess of alkali as possible in the finished solution. Experience at this point guides the operator so that the last single drop added changes the solution from translucence to a perfectly clear solution. The solution is then filtered through a sterilized paper filter and funnel into a graduated flask also sterile and the filter is then washed with sufficient sterilized freshly distilled water until the entire filtrate measures 30 cubic centimeters.

The writer uses a 30 cubic centimeter Record syringe with a 24 or 26 gauge needle. This is

much smaller needle than is ordinarily used and has its advantages in that it can be inserted into a very small vein, especially applicable to females where the veins are usually of smaller caliber.

So far I have given over two hundred and fifty injections by this method without any ill effects and with less reaction than with the old method of using large amounts of fluids introduced by hydrostatic pressure. The greater convenience of the new method to patient and physician is striking.

Strauss uses a 9 per cent. solution which he injects intravenously by means of a Record syringe. He prefers a special double needle, an outer sharp one movable upon an inner blunt one and supplied with a set screw by means of which it can be fixed in any position. With the point of the sharp needle projecting beyond the inner blunt one, the vein is punctured. The screw is then loosened, the blunt needle thrust forward into the vein, and no further injury to the vein is possible. He does not state the number of cases so treated, but says the injections are excellently well borne.

By using a Record syringe the solution is kept entirely free from air or in other words is enclosed; while in using the hydrostatic pressure method it necessarily follows that the solution absorbs a certain amount of air and oxidation takes place. The needle used should be small in caliber, sharp and clean, for by using a small needle no damage is done to the tissues nor do any scars remain at the point where the injection is made.

My experience with the intravenous injection of concentrated solution of salvarsan leads to the following conclusions:

1. The use of concentrated solution of salvarsan minimizes or does away with the ill effects due to imperfect distilled water, thus obviating one of the greatest dangers inherent in the hitherto accepted method.

2. The fact that no apparatus is required except a syringe for salvarsan injections provides a great simplification of technic, not only as regards bulk of apparatus but also as regards sterilization.

3. There is a reason to believe that concentrated solutions are more effective than dilute ones, in that the salvarsan in the former case is more slowly excreted.

4. For the nervous patient, the intravenous injection of a syringe of medicine is a procedure less taxing than the injection of a large quantity.



5. This new method surpasses the old both in being a great saving in time and also in enabling the operator to dispose with the services of an assistant.

6. One objection to the new method consists in the urgent necessity of a perfect technic in the intravenous injection itself. It is obvious that if the needle does not lie accurately within the vein, so that a small amount of the concentrated solution enters the perivascular tissue, the results may be even more disastrous than with the more dilute solutions. This danger must be faced, of course, but need not deter the skillful operator.

7. The degree of concentration permissible with salvarsan is a 1 to 3 per cent. solution which is perfectly well borne.

8. By the use of a small needle there is less danger of phlebitis or periphlebitis.

#### HEMORRHAGE DURING THE LATTER HALF OF PREGNANCY.

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Hemorrhage during the latter half of pregnancy may be classified either as accidental or unavoidable. By unavoidable we mean those cases in which the situation of the placenta in the uterine area of dilatation makes it impossible for such dilatation to take place without the occurrence of hemorrhage. The term accidental, if used with the full understanding of its meaning, may be applied to all other cases in which the placenta is situated above the area of dilatation.

These terms were first used to classify hemorrhage of this period by Rigby in his Thesis "An Essay on the Uterine Hemorrhage which Precedes the Delivery of the Full Grown Fetus," published first in 1776. While to-day we do not consider his classification of accidental hemorrhage as absolutely correct, still the term may be used to advantage if we consider it as applied to ablatio placenta, to rupture of the uterus, or of the circular sinus. Ablatio placenta, or premature separation of the normally implanted placenta, is the most frequent cause of accidental hemorrhage, the separation being of varying degree, either partial or complete.

Our knowledge of the hemorrhage of pregnancy up to 1664 was largely the result of the teaching of Hypocrites that ante partem bleeding was always due to a separation of the placenta from the fundus uteri, where it was invariably attached, and when the placenta

was found at the os, prolapse had occurred. Paul Portal, proved these ideas to be wrong and stated that at times the placenta was adherent to the lower portion of the uterus, in other words, a condition of placenta previa existed. Rigby's article probably left the deepest impression on obstetric literature of the day, but in all probability his cases of so-called accidental hemorrhage were our placenta previa lateralis and naturally the line of demarcation between placenta loosened in the process of the dilatation of the os, placenta previa, and ablatio placenta, must be an arbitrary one. It must not be lost sight of that sometimes placentae may so encroach upon the neighborhood of the retraction ring that slight separation takes place after retraction is marked and hemorrhage appear late in labor. A correct diagnosis is only possible by post partem inspection of the membranes.

As to the frequency of occurrence of premature separation of the placenta, it is difficult to make an estimate, as many cases are unrecognized. Churchill, about 1840, found in 68,982 labors obtained from various sources, 85 accidental, and 174 previal hemorrhages. Based on the statistics of Broadhead and the Chicago Lying-In Hospital, Holmes estimates the frequency of the condition as one to two hundred, as of pathologic interest and one to five hundred for clinic importance. As to the occurrence of cases of totally concealed bleeding no statistics are available. They are unusual and probably not often recognized, Goodell's and Holmes cases showing only 113 reports. Probably many sudden deaths are due to this form of hemorrhage.

The causes of premature separation of the placenta may be considered as exciting and predisposing. Exciting causes may be falls, blows upon the abdomen or elsewhere, violent exercise, coitus, a short umbilical cord, and even the condition of the mind itself. While these conditions may have some effect, that effect has probably been very much exaggerated, for without some coexisting pathological conditions these factors would seldom be effective. These pathological or predisposing conditions are the important factors. Endometritis of a chronic character is probably the most frequent cause, and multiparae are most frequently affected with this disease. The same pathological germs which produce inflammation in the multiparae are found during pregnancy, although the inflammatory condition usually precedes pregnancy.

Gonorrhea is a common factor. Some cases in which placental infarcts and hemorrhage occur are found associated with chronic nephritis. Syphilis of the placenta and acute infections with hemorrhage in the decidua have been noted. Degeneration of the decidua, myometritis, and even arterio sclerosis and Basedow's disease have been mentioned as causes.

Hemorrhage is the most frequently noted symptom of premature separation, and naturally signs of blood loss must be the most constant feature. Blood may escape from the uterine cavity. Nausea or vomiting may occur at the beginning and be followed by general or localized pain in the abdomen. Uterine distension may be noted or a tumor mass be found, and often for a brief time violent foetal movements occur. Examination showing the absence of the condition of placenta previa, makes the diagnosis evident. Our prognosis in these cases depend upon the amount of hemorrhage, the shock, the relation of the condition to labor, and the treatment.

The mild cases must be kept under very close observation and absolute rest and quiet should be the main features of the treatment. In severe cases the contents of the uterus must be removed as rapidly as possible if the os is sufficiently dilated. In case there is no dilatation and labor has not begun some means of inducing labor must be used. The cervix must be dilated instrumentally or by the introduction of the Barnes Bag, and after dilatation complete delivery is done by forceps, craniotomy or version. The last should be used only in unobstructed breech presentations. The placenta should be immediately removed and if the bleeding persists the uterus should be packed at once.

The predisposing factors in placenta previa are much similar to the preceding condition. Chronic endometritis, multiparity, sub-involution and twin pregnancy are all considered provocative of placenta previa, and these conditions themselves are frequently associated. According to De Lee the active causes are primary low insertion of the ovum, near the internal os or on its edge. The development of the placenta in the reflexa and its coming to lie over the os. Owing, perhaps, to endometritis; anomaly of the ovum itself, or deficiency of the cilia, the ovum slips down the uterine cavity and does not become attached until it reaches the region of the internal os. In placenta previa hemorrhage is the principal symptom. There is usually no pain, but just a per-

sistent bleeding. It usually comes on in the latter months of pregnancy and occurs at intervals with increasing frequency. The probability is that many of the cases of so-called premature separation of the placenta are, in fact, placenta previa itself, in which the placental overlapping in the dilating portion of the uterus, is of moderate degree.

Placenta previa as a complication at the time of labor, would be much more common if it did not so frequently interrupt pregnancy, abortion and miscarriage occurring in from 40 to 60 per cent. of cases. It is three to six times more common in multipara than in primipara and according to Hirst is most frequently met in the working classes. Fibroid of the uterus and carcinoma of the cervix are sometimes causative factors, undoubtedly because of the associated change in the endometrium. We may say that placenta previa occurs about once in twelve hundred cases.

We usually distinguish four types of placenta previa, central, partial, marginal, and lateral. In the first type the central portion lies over the internal os. In the partial the great part of the placenta lies on the right internal segment, but completely covering the os. In the marginal type a small margin projects while in the lateral the placenta occupies one side of the lower segment, with only a small portion in the canal of the cervix.

Hemorrhage occurs early in pregnancy from the central and partial types. Danger is most marked from the bleeding and from the obstruction offered by the placenta at the time of labor. The most common forms are the marginal and lateral types, while the central form is rare and extremely dangerous.

While bleeding may occur as early as the second or third month, usually its occurrence is during the last three months. There may be a sudden flow of blood without apparent cause. The flowing comes on in larger amounts and at more frequent intervals as pregnancy continues. Hemorrhage may not occur in some cases until labor has begun. Severe hemorrhage during pregnancy, if the pregnancy is uninterrupted, is followed by profuse flowing at the time of labor. Infrequently the bleeding may result from a rupture of the circular sinus itself. Hirst states the oblique and transverse presentations are ten times more frequent, and breech presentations four times more frequent in conditions of previa. There is a great liability of infection in these cases, and in a large per cent.



adherent placenta is found, and post partum hemorrhage results.

Pregnancy should be terminated as soon as the diagnosis of placenta previa is made. Hemorrhage occurring in the latter months of pregnancy is always dangerous, although there seems to be less danger in those occurring before the eighth month than after that date.

If the cervix is found sufficiently dilated version may be performed and a leg drawn down as a tampon, after which extraction may be done. In those cases in which the cervix is not dilated packing and tamponade may be used and if necessary the Romberg tube applied temporarily to control hemorrhage. In cases of lateral or marginal form the Vorhees or Barnes bag may be used to good advantage to produce cervical dilatation and to act as a tampon. After dilatation is complete, version and extraction may be done or forceps applied.

Cesarean section has been considered in these cases and under certain circumstances is a justifiable procedure, especially in young and uncomplicated cases. In hospital cases the maternal death rate is given as 5 per cent., while the foetal death rate is about 50 per cent. It is obvious therefore, that at the present time, the treatment of placenta previa can be very much improved upon.

Hemorrhage may occur late in pregnancy from certain cases of ectopic gestation in which the diagnosis has not been made earlier. The external bleeding in these cases is not profuse, and is associated with other symptoms which lead to the diagnosis which is readily verified by examination. In these cases there has, as a rule, been bleeding present earlier in the course of the pregnancy, beginning during the first few months. The pain associated with tubal rupture, and the attendant shock may be similar to premature separation of the placenta, but the latter occurs most frequently in the latter months of pregnancy. A thorough examination should clear up the diagnosis in these conditions. In all cases of ectopic pregnancy immediate operation is the treatment indicated if the patient is in operable condition.

A comparatively unusual source of hemorrhage in the latter part of pregnancy is that occurring from rupture of the uterus. This accident usually occurs during labor, and especially after long and difficult cases where obstruction to the exit of the child exists. However rupture may occur before labor has begun, in cases where the uterine muscle has been weakened by previous operative wounds, or by

disease of the muscle itself. Long continued pressure of the foetal part upon a limited area of the uterine muscle may destroy the nutrition and tone of the muscle at this point and rupture may result. These tears are usually transverse and begin in the lower uterine segment. Sudden sharp pain may be felt and hemorrhage occur from the vagina, while the patient presents an appearance of shock. Rupture occurring at this time must also be differentiated from *ablatio placentae*. Examination will usually reveal the presence of rupture by the finding of the foetus, or foetal parts, alongside of the contracting uterus. Tears of a small degree may not be noticed until after delivery of the child unless infection occurs. Incomplete rupture is not so fatal as those in which the peritoneum is involved and the result depends upon the passing of the uterine contents into the abdominal cavity. In the incomplete form, irrigation and drainage may suffice to save the patient; in more severe forms abdominal section is indicated at once. In 193 cases treated by abdominal section the maternal mortality was only 55.3 per cent. according to Schultz; the foetal mortality is about 90 per cent. If the tear is small the child may be taken by high version, forceps, or craniotomy and if possible the placenta removed through the vagina, but if difficulty is experienced it should be removed through an abdominal incision.

#### CONCLUSIONS.

In conclusion we may state briefly:

1. Hemorrhage occurring in the latter half of pregnancy may be either accidental or unavoidable in type, and in nearly every case is associated with some pathological condition of the uterus or of the ovum.

2. By an accidental hemorrhage we mean hemorrhage occurring from the separation of a part or all of the placenta from its normal situation which is above the contraction ring.

3. By unavoidable hemorrhage we mean placenta previa in all its forms.

4. It may be at times extremely difficult to make a differential diagnosis between the lesser forms of placenta previa and premature separation of the placenta.

5. The treatment of accidental hemorrhage depends upon the severity of the hemorrhage and the urgency of other symptoms.

6. The treatment of placenta previa is control of hemorrhage, immediate evacuation of the uterus as soon as diagnosis is made, and with

minimum amount of traumatism to the child.

7. Various methods may be employed to empty the uterus. When dilatation is complete the membranes may be punctured and version and extraction may be performed.

8. If dilatation is not complete one of the most satisfactory methods of dilating the cervix in my experience, has been the use of the dilatating rubber bag. Cesarean section should be considered under favorable circumstances when it can be performed by a competent surgeon.

9. An effort should be made to reduce the foetal mortality which is now approximately 50 per cent.

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#### ERRORS IN DIAGNOSIS.—A CASE AND ITS LESSONS.

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H. N., colored, aet. 27, married, by occupation a teamster, was admitted to Harper Hospital, Oct. 9, 1916, friends giving the following information: Family and personal histories were practically-negative. Three children were living and well, wife having had no miscarriages.

The patient had had no illness in the last ten years and his present illness was said to date from an injury ten days prior to admission, when a bale of hay falling from his wagon had struck him on the head. Patient had said that it did not hurt him much and he had not been unconscious, but had complained of frontal headache from then on for one week. Then had an attack of vomiting, but he had evinced no abdominal pain or symptoms.

Three days prior to admission, for a short time, patient was apparently delirious and periods of delirium recurred until he became unconscious the day before his admission to hospital.

His habits were said to be fairly good. His wife later gave a history of rather frequent cramplike abdominal pains, of late, alleging that some three weeks prior to admission he had once vomited and had to get off his wagon.

Cardio-respiratory, gastro-intestinal and genito-urinary histories were otherwise negative. A week before admission patient was alleged to have had some fever, but none for few days prior to admission.

Examination showed a well developed, well nourished colored man, quite unconscious and having at times spasmodic contractions of the diaphragm. Skin showed few minor scars; examination of the special senses was negative; chest negative; no cardiac abnormalities, pulse entirely rhythmic, and of fair volume and tension. There seemed to be slight left iliac tenderness; kidneys, spleen and liver not palpable. Reflexes of arms present and normal; pupils were equal and normal in size, and reacted normally to light. Jaw reflex was normal. There was some rigidity of the neck. Cremasterics were absent. Patellar and Achilles jerks were present, and thought to be a trifle more active on the right side. There was no clonus, Babinsky, Oppenheim or Gordon reflex. There was well marked Kernig sign on both sides. Motor power could not be tested. Ophthalmoscopic examination was negative.

October 10, hemoglobin was 88 per cent. and white blood-cells 9,000. Widal reaction was positive and the surgeon who had examined him referred the patient to the medical staff with the advice that he had an infection and was not a surgical case.

October 11, lumbar puncture showed spinal fluid



under normal pressure and containing 1,800 red cells per cubic centimeter.

October 12, patient developed clonus in both ankles, but returned to consciousness and seemed better.

October 13, spinal fluid again found bloody, but tests for Urobilin and Wassermann were negative. Patient talked fairly clearly and again attributed all of his ills to the injury received ten days prior to admission—was quite positive that he had been well before that time. The temperature curve was quite irregular, but not at all typical of typhoid.

October 14, slight clonus still present, involuntary urination and defecation. Pain sense not impaired, no proximal or distal ataxia. Reflexes in arms and legs slightly exaggerated, stereognostic sense was good.

Diagnosis was hazarded of probable fracture of base of skull with hemorrhage pressing on the motor tract in the basilar region. A dissenter from the diagnosis, the writer, impressed with the well-marked Kernig, cervical rigidity, etc., believed that an infectious meningitis was responsible for the clinical picture.

October 16, the blood-count showed; white blood-cells, 27,000, differential, polymorphonuclears 83.2

per cent., large mononuclears 3.6 per cent., small 12.2 per cent. The patient died October 18.

There had been two hemorrhages two or three days before death, of which due account had not been taken. They were thought to have been due to excoriations of the patient's skin from scratching himself about the scrotum and anus. As a matter of fact, they were hemorrhages from the bowels; the source of blood should have been more carefully sought and had we not lost sight of our positive Widal and not been led astray by the specific account of injury, to which patients and friends attributed all his ills, we should have better anticipated the findings of the autopsy.

This revealed ulcers in all the lymph follicles of the colon and several of the lower Peyer's patches were ulcerated. The spleen was not enlarged. The brain and cord were congested but no hemorrhage or abscess was found. There were patches of broncho-pneumonia in left lung and an old tubercular focus in the right lung. The autopsy was otherwise negative. The patient died of typhoid.

Here we neglected to give due significance to our positive laboratory findings, and were unduly diligent in striving to correlate nervous symptoms with the history of trauma.

1501 David Whitney Bldg.

*The Phenolsulphonephthalein Test.*—It has been assumed that excretion of less than 60 to 80 per cent. of phenolsulphonephthalein in 2 hours is an indication of renal insufficiency. It has been found, however, that in certain experimental conditions, phenolsulphonephthalein may be destroyed in the body and therefore not appear in the urine although the kidneys function normally. If this condition is found to occur in clinical cases the interpretation of the tests may have to be limited to this: an excretion of 60 to 80 per cent., i. e., a positive result, within two hours after the injection of the phenolsulphonephthalein is evidence of satisfactory renal activity (*Jour. A.M.A.*, Feb. 3, 1917, p. 379).

*Firolyptol Plain and Firolyptol with Kreosote.*—The Council on Pharmacy and Chemistry reports that Firolyptol (The Tilden Company) is said to be composed of eucalyptol 10 drops, cottonseed oil one-half ounce and Firwein enough to make one ounce, and that, as the composition of Firwein is secret, the composition of Firolyptol is also unknown except to the manufacturers. Firolyptol with Kreosote is said to contain, in addition to whatever may be the component parts of Firolyptol, 10 minims of creosote to each ounce. The advertisements for these two preparations seem to have for their keynote the assertion that cottonseed oil is a particularly

valuable nutriment and that when combined with the constituents of Firolyptol and Firolyptol with Kreosote it becomes particularly valuable to the tuberculous. The Council discussed the extravagant claims made for these proprietaries; reminds that food and fresh air, not drugs, constitute the fundamentals of the treatment of tuberculosis; and finds that neither of the products is acceptable for New and Nonofficial Remedies (*Jour. A.M.A.*, Feb. 17, 1917, p. 564).

*Fate of Trypsin in the Stomach.*—Judging by recent experiments, it appears that the proteolytic enzyme of the pancreas isolated as trypsin is capable of withstanding a rather long digestion in presence of hydrochloric acid and pepsin provided that sufficient protein is present to combine with all or a part of the acid and so bring the free acid down to a certain level. From the observations it seems possible that some tryptic digestion may occur within the stomach when the free acid is low from combination with protein. The results do not, however, even remotely suggest that the administration of a few grains of the various commercial products claimed to contain trypsin or pancreatin would have the slightest therapeutic significance (*Jour. A.M.A.*, Feb. 17, 1917, p. 554).

# TRANSACTIONS

OF THE

## Clinical Society of the University of Michigan

Stated Meeting, January 3, 1917

The President, CARL D. CAMP, M.D., in the Chair

Reported by REUBEN PETERSON, M.D., Secretary

### OCULAR CHANGES IN MULTIPLE SCLEROSIS.

WALTER R. PARKER, M.D.

(From the Ophthalmologic Clinic, University Hospital, Ann Arbor, Michigan.)

I wish to report a case of multiple sclerosis, showing characteristic eye symptoms and to conclude with a summary of the eye findings commonly met with in this disease.

Mrs. B., aged 32, gave a history of double vision coming on fifteen years previously, followed by partial failure of distant vision and diplopia appearing during an attack of nervous prostration, which symptoms have recurred at various intervals since that time. At the present time she complains of headache, uncertain gait, sometimes double vision and blurred distant vision.

*Family History.*—On the mother's side she has an epileptic uncle and an asthmatic aunt. She was one of three children, and had all the contagious diseases of childhood excepting diphtheria.

*Personal History.*—Sixteen years ago she experienced some difficulty in the use of her right arm which receded and two years later recurred in a more exaggerated manner. She says that the arm was completely helpless for a number of months and again recovered. The nystagmus is about six years duration. Insecurity upon her feet dates back two years. At the present time she has some loss of coordination in all four extremities with a tendency to spasticity in the left arm and both legs. The deep reflexes are unequally exaggerated throughout the body. There is a distinct tendency to ankle clonus and extremely active Babinski on both sides. Sometimes she walks with freedom but for the most part her gait is rigid and tottering.

*Examination.*—Vision in the right eye 6/60, with correction 6/12; left eye 6/21, with correction 6/12.

There is a marked nystagmus in the right eye present constantly and nystagmus on motion in the left eye, power of convergence limited, pupil moderately dilated, but reacts to direct and consensual stimulation, and in accommodation.

*Ophthalmoscopic Examination.*—Both nerve heads pale, otherwise negative.

Examination of the muscles showed a left hyperphoria of 1°, esophoria for distance of 3½°, exophoria of 9° in accommodation.

Field of vision showed bitemporal contraction of form, with a marked concentric contraction for colors, with some interlacing of blue and red. There are also numerous areas of partial scotomata, most marked in the temporal fields. Fig. 1.

*Ocular Changes In Multiple Sclerosis.*—In multiple sclerosis, the eye symptoms appear as disturbances of vision and of the extrinsic muscles, also as nystagmoid movements of the globe.

The visual disturbances depend, as Unthoff has shown, upon an interstitial neuritic change in the optic nerve, optic tract and as far back as the occipital lobe.

The optic nerve may become involved at any stage of the disease. It may show changes that constitute one of the earliest manifestations of the disease. In fact the eye changes may precede all the other symptoms for several years. The patient may give a history of a limited period of impaired vision which entirely cleared up. The neuritis may be either papillary or retrobulbar, very rarely an outspoken choked disc.



The atrophy is not complete as in tabes and usually the affection is one-sided. One eye may recover and after a time the other become affected. The process may remain stationary for a long time. Occasionally a diffuse or temporal atrophy will result, leading to a permanent change, but rarely, if ever, does complete blindness occur. In fact, under proper treatment,

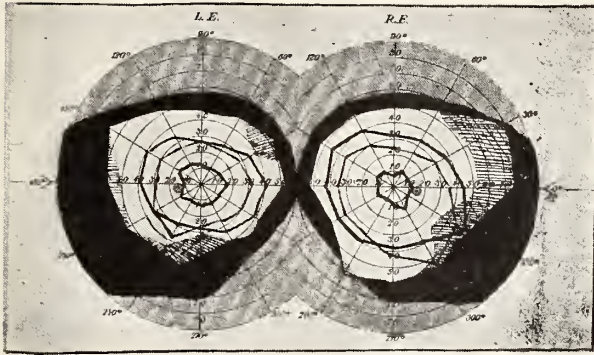


Fig. 1. Visual Field from Case reported.

improvement has been reported in about 50 per cent. of the cases. When the atrophy is secondary to a neuritis, the nerve may show evidences of the previous inflammation. The change in the optic nerve may develop quickly or be very insidious in its onset. In the acute forms the central vision may be greatly reduced and later almost completely recover, variation in the amount of amblyopia being quite frequent.

The visible ophthalmoscopic changes, which occur in about 50 per cent. of the cases, often bear no direct relation to the impairment of vision. The vision may be markedly impaired in spite of an absolutely negative ophthalmoscopic finding or the disc may appear considerably atrophied and still the central vision not be correspondingly reduced. Occasionally complete recovery occurs, but as a rule a distinct amblyopia persists. Lasting blindness is rare.

There is no regular narrowing of the visual field. There may be an irregular peripheral contraction, a central scotoma, or multiple scotomata. The scotomata may be relative or absolute for form or for color. More rarely a ring scotoma may be present. As the case improves the fields may become quite normal, although usually the defect becomes permanent. Fig. 2 shows characteristic multiple scotomata often seen in these cases.

When the visual disturbance takes the form of a central scotoma, the differential diagnosis between multiple sclerosis and retrobulbar neuritis may be difficult, especially when the latter is not due to chronic intoxication, has a sudden onset, and shows analogous fluctuations

in intensity. It should be borne in mind in such a case that central scotomata are much more common in retrobulbar neuritis than in multiple sclerosis, and that in the latter disease the central scotoma is usually relative while in retrobulbar neuritis it is ordinarily absolute. Multiple sclerosis is present in about 3 per cent. of all retrobulbar inflammations of the optic nerve.

While true nystagmus is rarely present, the nystagmoid movements constitute one of the most important of the muscular symptoms of multiple sclerosis. They are analogous with the intention tremor of the remaining muscles and show especially in extreme positions of the eye.

Disturbances of the pupillary function, even variations in the size of the pupil are very rare in multiple sclerosis.

The palsies of the eye muscles occur in about 20 per cent. of the cases. They are nuclear or fascicular in origin, and practically always partial. They are, therefore, present in one or both eyes and often symmetrical. An ophthalmoplegia externo may be present but no cases of ophthalmoplegia interno have been observed. Not infrequently there will manifest itself in this disease, paresis of the associated movement of the eyes, of convergence, or an ophthalmoplegia externo as well as partial paresis of the oculomotor nerve. The oculomotor palsy is nearly always partial, while the abducens frequently becomes completely paralyzed. The palsies of the eye muscles may recover as in

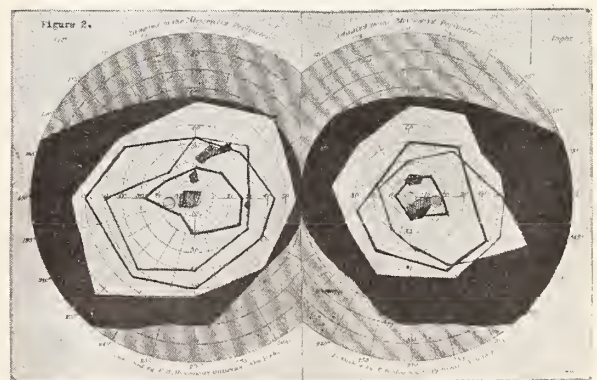


Fig. 2. Field taken from Case of Multiple Sclerosis showing Multiple Scotomata.

the case with all symptoms of multiple sclerosis, but as the muscles are as a rule affected late in the course of the disease, the loss of function may be lasting.

Occasionally there may be present in multiple sclerosis the most severe general symptoms of brain tumor, including the choked disc. In such a case independent spinal cord symptoms,

as urinary disturbances and areas of anesthesia, may clear up the diagnosis.

Hysteria and multiple sclerosis are very frequently confused, especially when the latter occurs in a young girl. The eye symptoms alone can clear up the diagnosis in some cases.

#### DISCUSSION.

DR. CARL D. CAMP: Dr. Parker's paper has interested me greatly. I think the frequency of multiple sclerosis is very much underestimated in America. In Vienna and in Germany, more especially in the former, it is regarded as the most frequent of the organic nervous diseases, more frequent than tabes. In our clinic here last year we diagnosed multiple sclerosis 51 times, tabes dorsalis 98 times. The diagnosis is so extremely difficult in many cases that I would not be surprised if we had missed half of the cases of multiple sclerosis which we have seen. We have either diagnosed them as some other disease, or been forced to record the diagnosis as "not made." Considerable misconception arises probably from the fact that Charcot described a triad of symptoms as characteristic of the disease,—scanning speech, nystagmus and intention tremor. Most physicians diagnose the disease on that basis. As a matter of fact, probably not more than 30 per cent. of the cases show this triad of symptoms. Oppenheim has called attention to the purely spinal type of multiple sclerosis. I have seen cases that have come to necropsy from state hospitals for the insane in which apparently there was purely a mental clinical picture, and the examination of the brain postmortem, showed the cause of the mental symptoms to have been multiple sclerosis. On account of this difficulty in diagnosis, any assistance which we can get from ophthalmoscopic examinations or any examination that the ophthalmologist may make, is, of course, very valuable. One must remember, however, that there are many cases of multiple sclerosis in which there are no visual or ocular changes, just as there are other cases in which the visual or ocular changes constitute practically the entire clinical picture. It is important to make the diagnosis of multiple sclerosis because it is a disease which can be much benefited by treatment, and it may be, in some cases, cured.

DR. R. BISHOP CANFIELD: I was interested in what Dr. Parker had to say about nystagmus in multiple sclerosis. In that connection I would like to ask Dr. Parker how the nystagmus compared with the difficulty in vision. Was it most marked in those cases in which the difficulty in vision was most marked? I should like to call attention to the fact that one can differentiate between an intention tremor and a true nystagmus. There are definite ear findings in multiple sclerosis one of which is a nystagmus and that is purely of a vestibular type. I would like to ask Dr. Parker whether the nystagmus which he notes frequently is of the vestibular or auricular type. In the cases which I have examined in which

typical nystagmus was present either as the result of some lesion in the vestibular tract or farther forward, not only a nystagmus but a well defined interference with the cochlear tract was also present. I dare say that I have examined some of the cases which Dr. Parker has also examined in this clinic, and in some of them the nystagmus was no doubt due to lesions posterior to the posterior longitudinal bundle, while in others it was distinctly of an auricular type.

DR. GEORGE SLOCUM: Most writers give the relative frequency of nystagmus in multiple sclerosis as about 70 per cent. of all cases. Of these cases 20 per cent. are stated to be true nystagmus, while the remaining 80 per cent. are said to be present on ocular movements only. While pupillary symptoms are not prominent miosis sometimes occurs, this symptom being present when there is considerable irritability to light.

Dyschromatopsia has frequently been noted in our cases and partial scotomata when present have usually been for red and green. These changes in the visual fields may have considerable diagnostic value when found in connection with other symptoms of multiple sclerosis. As stated by Dr. Camp the eye findings may often be of great assistance in the diagnosis of this disease.

DR. PARKER: In regard to the frequency of multiple sclerosis, I am glad Dr. Camp spoke of that point. Unquestionably it is the one nervous disease that comes to us first, more often than any other. It is not an unusual thing to see these patients in an ophthalmologic service before they have sought advice for other symptoms. The one other general disease where we are consulted first is perhaps nephritis, the loss of vision from albuminuric retinitis being the symptom that leads the patient to consult us. As the result of treatment in multiple sclerosis is much better in the cases which are cared for early, an early diagnosis is most important.

With regard to Dr. Canfield's question, in our own cases only about one-fourth show vestibular nystagmus, the other 75 per cent. of the ocular type. Our cases of multiple sclerosis showing nystagmus have not been classified with reference to the visual acuity and I am unable to say whether it has been more defective in the cases showing vestibular nystagmus than in those of the ocular type.

#### REPORT OF TWO CASES OF BLADDER TUMOR.

LOWELL L. YOUNGQUIST, M.D.

(From the Genitourinary Clinic, University Hospital, Ann Arbor, Michigan.)

The occasion for reporting these two cases is not so much on account of their infrequency, but rather, because surgery of the bladder, directed toward the removal of new growths, is still in its developmental stage, and because the end results obtained point favorably to the



operative and postoperative methods used in these two cases. One is impressed by a brief review of the literature, that at the present time there is no generally accepted method of interference. As evidence of this we find as many methods as there are authorities. One recommends the X-ray, another fulguration, others rely upon the operative cystoscope while a few advise only a radical procedure.

As a matter of historical interest, Warner, in 1747, successfully operated for a bladder tumor from above. Guyon is credited with the suprapubic method of approach. Franz was the first to advise total removal of the bladder. Brandenhauer in 1887, was the first to carry it out, however, unsuccessfully. In 1888, Pewlik made a successful total cystectomy. In this same year, Rydygier advocated the abdominal mode of attack. Yet too critical judgment cannot be passed upon the results of these earlier operators, in view of the advances made in diagnostic, operative and postoperative methods since their time.

In the diagnosis of these cases 'in general, one resorts to inspection, percussion and auscultation, not only as regards the size, shape and location of the tumor itself, but also any accompanying glandular involvement. A careful examination of the urine, and particles of tissue passed with the urine, also often give valuable information. And finally, the indisputable evidence is gained only by cystoscopic examination of the bladder interior. Having satisfied ourselves, by these methods, that the bladder tumor exists, it is equally important for favorable end results to become acquainted with the patient's general condition, including renal functions, blood pressure, blood urea, Wassermann, etc., before considering any operative procedure.

There are only four avenues of approach: The perineal, the pararectal, the vaginal and the suprapubic. The last is the best for the removal of primary growths of the bladder, as it admits a free exposure of the interior of the bladder, with sufficient room for accurate work, is by far the easiest method of approach and there is less danger of local postoperative complications.

The technic of the operation is briefly as follows, considering only those cases which require extraperitoneal subtotal cystectomy:

1. The bladder is thoroughly irrigated and distended with saturated boric acid solution, the catheter being left in place and clamped.

2. The field of operation is prepared and the patient placed in Trendelenburg's position.

3. A median incision is made, extending

upward from the pubes halfway to the umbilicus. A transverse incision is made across the rectus and the fascia of the rectus so as better to expose that part of the bladder involved.

4. The prevesicle fat and peritoneum are gently stripped upward exposing the whole bladder.

5. The point of incision into the bladder is located, edges caught with a double tenaculum, and long retractors inserted into the bladder. The tumor in this way is exposed. A wide removal is now effected, through all the coats of the bladder. It may be necessary to use pedicle clamps during this part of the operation. The bladder is thoroughly sponged and a careful investigation made for further pathology. Especially is this necessary in villous papillomata, which type of tumor readily attaches itself to other parts of the bladder and in this way, gives rise to new tumors.

6. The bladder wall is then tightly closed with a double row of sutures, and the remaining steps of the operation are the same as for the closure of the wall in any abdominal operation, with the exception that a small cigarette drain is placed in contact with the lower angle of the bladder incision, to care for any bladder leakage.

7. The special points in the postoperative care are:

- a. A permanent catheter to prevent distention of the bladder.
- b. Daily irrigation of the bladder with small amounts of boric solution.
- c. Special measures to prevent urethritis and stoppage of the catheter.

The first case is that of a woman, Mrs. S H., married, age 42, who entered the genitourinary clinic on May 25, 1916, complaining of weakness, inability to be up and about, and bloody urine. The family history is negative. There is nothing of note in her personal history and her menses have always been regular. She was married at 22, and has had six pregnancies, with two miscarriages and two abortions, attributed to pernicious vomiting. There is no history of bladder disturbance up to the onset of the present illness. In December, 1914, the patient for the first time noticed frequent nocturnal micturition, the urine being bright red in color at the time. After being present for ten days, these symptoms disappeared as suddenly as they had appeared and the patient was apparently well, until the second attack, which occurred in February, 1915. During this second attack, small amounts of blood were passed in the urine inter-

mittently for six weeks, when the symptoms again disappeared. A third attack of hematuria occurred in the early part of July, 1915 and lasted for about a month. Between July and November, 1915, blood occurred in the urine but three or four times, lasting a day each time. During all these attacks and in the intervals between, the patient felt perfectly well, and has been able to do her work. In December, 1915, for the first time she noticed that she was passing large clots of blood in the urine, which continued up to the time of entrance to the University Hospital in May, 1916. During this latter attack, the patient was bedridden and lost thirty pounds in weight. The physical examination of the patient upon entrance showed a marked stage of exhaustion, a severe secondary anemia, with a blood count of 1,860,000 reds, 4,500 whites and 20 per cent. hemoglobin. Her Wassermann was negative. There were marked hemic murmurs over the precordia. The urine was loaded with albumin, and showed many red blood cells, white blood cells and casts. Her kidney functional test showed 20 per cent. and 10 per cent. the second hour, a total of 30 per cent. Cystoscopic examination showed papillomatous growths, one in the region of the right ureteral opening, the other mostly on the left side and low down. X-ray of the kidneys was negative. Transfusion could not be arranged, no donor being procurable. The patient was placed upon a strict regime directed toward her general condition, and in addition received daily irrigations of the bladder with 10 per cent. hot antipyrin solution. During her last month in the Hospital she received interval fulgurations with the hope of removing the papilloma on the right side, and as she refused operation palliative cauterization of the carcinoma was done and hemorrhage from the tumor controlled. As a result of this treatment the patient's condition rapidly improved, she was no longer a bed patient, her hemoglobin increased to 85 per cent., her hematuria stopped, she was stronger and gained fifteen pounds in weight. On July 27, 1916, cystoscopic examination showed the tumor on the right side of the bladder to be much smaller and the patient was discharged against our advice.

The patient returned to the Genitourinary Clinic on September 29, 1916, stating that at times, during her absence, she had had recur-

rences of her former symptoms but her general condition had apparently not changed since her discharge in July. Upon cystoscopic examination the papilloma on the right side of the bladder had entirely disappeared, but that on the left side was still present. This latter growth was fulgurated weekly until November, without any marked change. On November 7, 1916 the patient was operated upon and the tumor removed. The pathologic diagnosis of the tumor by Dr. Warthin, was: Carcinomatous transformation of a papilloma. This patient made an uneventful recovery and was discharged seventeen days after operation. She was advised to return for observation.

The second case, Mrs. D. H., married, aged 40, entered the Genitourinary Clinic on November 13, 1916, complaining of frequent and smarting urination and shreds in her urine. These symptoms were first noticed in January, 1916 and have been gradually growing worse. There is a family history on the paternal side of tuberculosis, Bright's disease and cancer. The patient has never been strong; as a child she had pertussis and typhoid at 14. She has had frequent attacks of tonsillitis with two mastoid operations, 1908 and 1911. Since her marriage she has had gonorrhea, tuberculosis and syphilis, having received treatment for the latter. Menstrual history is negative. She has had six pregnancies, four of which were terminated by self-induced abortions. Her present trouble dates back to January, 1916, at which time she noticed frequent and burning micturition and the passage of shreds in her urine. At this time there was no marked pain. These symptoms have gradually increased in severity and on entrance, there was marked tenderness over the bladder, and sharp pain in the region of the right kidney. There has been very little tendency toward bleeding. Physical examination is negative. Cystoscopic examination on November 14, 1916 showed, on the right side of the bladder, a nodular tumor with an area of ulceration in the portion nearest the urethra. On November 21, 1916 the patient was operated and the tumor excised through all the coats of the bladder. On close examination it was found to have infiltrated the right ureter, the diseased portion of which was excised and the ureter transplanted into the bladder. Pathologic diagnosis by Dr. Warthin, is, medullary squamous



celled carcinoma. This patient is still under treatment.

#### DISCUSSION.

DR. JOHN W. CHURCHMAN: I unfortunately missed the earlier part of this paper, but I would be very glad to say a word about bladder tumors in which I have been interested for some time. I will speak first as regards my experience with fulguration. It has not been as satisfactory as the experience of others, particularly some of the New York men, and I think the particular danger of fulguration is the fact that we don't know, either by macroscopic or microscopic tests, any way to distinguish those tumors which will respond and those which will not. It is not altogether a question of malignancy. Even if one can excise a piece of the tumor through a cystoscope, one cannot say whether it is a variety which will respond to fulguration. Unless, therefore, fulguration of bladder tumors is controlled by a very careful cystoscopy, I think it is one of the most dangerous forms of therapeutics which we have.

As regards excision of bladder tumors, I think there could hardly be a field of surgery where excision would be more satisfactory, if it were not for the problem presented by the ureters. Rarely can a large part of the bladder be excised without injuring the ureters. I have under observation now a case in which a tumor was treated repeatedly with fulguration without effect, the patient being kept under repeated cystoscopic observation. It became necessary to excise certainly over half of the bladder and probably nearly two-thirds, so that we were quite doubtful whether we would be able to get a closure. Closure was made and the patient has from a functional standpoint, a perfectly normal bladder. He is a man of 55 years and passes his water about every three hours and gets up perhaps once a night. With the cystoscope, I think it would be quite impossible to tell that he had ever been operated upon at all. I think we have been unduly cautious in the manner of approach of these bladder tumors in not going through the peritoneum. It is quite a simple thing to do. If the peritoneum is opened at once and packed off just as you do in a pelvic case in the female, you can then dissect the bladder free, and the ureteral problem, attacked from the peritoneal cavity, is much easier than from the front through the bladder itself.

Where the ureter is involved, my own feeling is that either the case is not operable at all, or else a nephrectomy should be done. Of course, one can transplant the ureter in some cases into the rectum, or some part of the bowel, but the results on the whole have been pretty discouraging with transplantations into the bowel and there is no reason why a nephrectomy should not be done.

I think the important thing aside from the distinctly technical problem as to the removal of bladder tumors is that if the surgeon has any chance at all the results in excision of bladder tumors are ex-

traordinarily good, and, secondly, that there is no way of telling positively by either microscopic or macroscopic appearance, which the dangerous tumors are, so that they should not be fooled with. They belong from a microscopic standpoint in a class by themselves. The appearances of some of the benign tumors border very closely on the malignant type, and many of the malignant tumors look very much like benign tumors, so that one should not draw conclusions from pieces which are dissected out. These tumors should be treated radically with an excellent chance of cure, and if fulguration is practiced, it should be done only under the most careful control with the cystoscope.

DR. REUBEN PETERSON: I would like to ask Dr. Churchman to go into a little more detail about his results in transplantation of the ureters into the rectum, and if he has tried to treat these cases by tying off the ureter with the idea of atrophying the kidney. I was very much surprised at the recent meeting of the Southern Surgical Society to hear Charles Mayo relate the number of cases in which he had done the latter procedure. I read a paper before the Society at the same time, in which I described the technic of forming a cloaca in inoperable cases of vesicovaginal fistula, opening the rectum and then closing the introitus. In the discussion of that paper quite a number of men related their experiences, and some of them advocated the transplantation of the ureters into the rectum. They quoted Coffee and his technic. The results of my experiments made some years ago were that we never could tell in any transplantation of the severed ureter into the bowel what kind of an infection we would get. Some kind of an infection almost invariably resulted. It might be a pyemia or a pyelonephritis which would not destroy the life of the patient but would partially heal. Some of the results reported there were at entire variance with my experience. Dr. Franklin H. Martin about fifteen years ago did quite a number of resections of the entire bladder. He transplanted the ureters into the bowel and those patients who survived the operation almost invariably died of pyelonephritis.

DR. CHURCHMAN: In reply to Dr. Peterson's questions, I have never transplanted the ureter into the rectum because in the first place, it seemed like a very bad surgical procedure, and in the second place, a review of the literature confirms that opinion. There have been a few successful transplantations if followed for a short time. If followed for a long time, a bad kidney infection follows. It seems to me a much better surgical procedure to remove the kidney at the time of the operation. I have heard Dr. Mayo make the same statement regarding tying off the ureter. It is well known experimentally that one can ligate a ureter without always having the development of a hydronephrosis. This develops not when there is complete stoppage, but when there is a partial stoppage. Complete stoppage gives atrophy. If you ligate a ureter, as is occasionally

done accidentally, you almost always get a urinary fistula because at first there is a little distension which through necrosis forces the ligature off, or the catgut dissolves resulting in leakage. So it is more difficult for me to understand why you don't get leakage of urine at first. It is hard to believe that that can be done with impunity. Doubtless one can do it occasionally and get away with it, but it seems to me at any event much safer to remove the kidney on that side because then you have no danger of infection, and these infections back of a ligated ureter are not always simple, but sometimes lead to pyemia and death. So if you have an infection, why not take the kidney out?

DR. ROLLAND W. KRAFT: The experience in the genitourinary clinic agrees with that of Dr. Churchman regarding the regeneration of the bladder. When the first patient left the Hospital, the line of incision had disappeared except for two dimples and one of these was very near the ureteral opening.

On December 21, 1916, Mrs. H. was cystoscoped by myself and the bladder was found in excellent condition. The line of suture was well healed, slightly dimpled in two or three places. The end of the incision came within one-half inch of the ureteral opening. Examination of the urine was negative and the general condition of the patient was splendid.

In regard to the differential diagnosis, we must consider all genitourinary conditions starting with hematuria, as the one principal symptom and often an only symptom in cases of bladder tumor is blood in the urine. Among such conditions are hemophilia, which can usually be readily ruled out. Renal hematuria due to parasites, injury, movable kidney, hydronephrosis, tuberculosis, syphilis, tabes, stone, tumor or hemorrhagic nephritis must always be thought of. All are easily ruled out by the accompanying symptoms and absolutely by the cystoscope. The ureter may give rise to bleeding because of a small polyp, a stone, a varicose vein or some trauma. This leaves the posterior urethra and prostate to be eliminated. Primary bleeding from the prostate without any other symptom is very rare. Among the causes of bleeding from the bladder, primarily we have stone, tuberculosis, syphilis and varicies. With the present technic of cystoscopy there is no excuse for mistaking any of these conditions. Both of these cases gave positive findings upon rectal and bimanual examination. Removal of a piece of tissue is not considered by some authorities as warranted. It was, however, done in both of these cases through the cystoscope by means of a snare and a positive diagnosis as to type of tumor established before the operation was undertaken.

## HISTORY OF TRANSFUSION OF BLOOD —REPORT OF ONE HUNDRED AND FIFTY TRANSFU- SIONS.

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The blood has been regarded as synonymous with life from the very earliest time. Many references are made to transfusion of blood in the writings of the ancient Egyptians. It was condemned in the works of Pliny and Celsus. Libavius in 1615 report in "*Defensione Syntagmatis Arcanorum Chymicorum*" as follows: "There is present a robust healthy youth full of lively blood. There is also present one exhausted in strength, weak, enervated, scarcely breathing. Let the operator have silver tubes passing between them; let him open an artery of the healthy one; insert the tube and secure it. Next let him find the artery of the patient and adjust the receiving tube. Now let him adapt the two tubes to each other and the arterial blood of the healthy one, warm and lively, dances in the vessels of the sick one; and immediately it produces the appearance of life and removes all languor."

It is recorded that the first transfusion of blood in man was performed by Jean Baptiste Denys of Montpellier, physician to Louis XIV, in June, 1667. The case was that of a young man dying from repeated venesection, and into his veins Denys injected the blood of a calf or a lamb. Following the operation the patient apparently recovered his health. The procedure was criticised very severely with the result that it was decreed, "For the future, no transfusion should be made on the human body, but by the approbation of the physicians of the Faculty of Paris."

There is an account, however, of transfusion in the case of Pope Innocent VIII, one hundred and seventy-five years earlier than this, to be found in Villari's life of Savonarola, describing three attempts made in transfusion of blood from three youths to the veins of the aged Pontiff, but with no improvement in his condition and resulting in the death of the boys. The "*Life and Times of Rodrigo Borgia*" gives another version refuting the above: "Three boys were bled until they died and the Pope drank a draught prepared from this blood, without benefit."

It seems probable that transfusions of blood were attempted before the time of Harvey's



discovery of the circulation of the blood in the seventeenth century.

The following is found in the diary of Samuel Pepys, describing the meeting at Gresham College: "November 14, 1666, Dr. Croone told me, that, at the meeting at Gresham College tonight, which it seems, they now have every Wednesday again, there was a pretty experiment of the blood on one dog, let out, till he died, into the body of another on one side, while all his own ran out on the other side. The first died upon the place. The other very well, and likely to do very well. This did give occasion to many pretty wishes, as of the blood of a Quaker to be let into an Archbishop, and such like; but, as Dr. Croone says, may, if it takes, be of mighty use to man's health, for the amending of bad blood by borrowing from a better body."

In a footnote is given the following: "At the meeting on November 14th, the experiment of transfusing blood of one dog into another was made before the Society by Mr. King and Mr. Thomas Coxe upon a little mastiff and a spaniel with very good success, the former bleeding to death, and the latter receiving the blood of the other, and emitting so much of his own as to make him capable of receiving that of the other." On November 21st, the spaniel "was produced and found very well." The experiment of transfusions of blood which occupied much of the attention of the Royal Society in its early days was revived within the last few years.

"November 16: This noon I met with Mr. Hooke, and he tells me the dog which was filled with another dog's blood, at the College the other day, is very well, and like to be so as ever, and doubts not its being found of great use to men; and so to Dr. Whistler, who dined with us at the tavern."

Several transfusions are reported by Denys in which from 5 to 10 ounces of the arterial blood of a lamb were usually taken. The first, a case showing condition of depletion from venesection, resulted in complete cure; the second, purely experimental, a perfectly healthy man agreeing to the trial: ten ounces of blood were removed from his vein and a similar amount from a lamb, injected into him. No disagreeable results were noted, and the man experienced an agreeable sensation of warmth. The third case was that of an insane man, 34 years old, escaped from a place of confinement, who was captured and transfused with five or six ounces of blood from a calf. A larger quantity was used a second time. Disapprobation of the

Faculty of Paris discouraged further transfusions until early in the nineteenth century in France.

Lower, about the same time that Denys was working in France, was experimenting along the same line in England. His discoveries are reported in 1683, although as early as 1666 he had transfused the blood of three calves into three dogs. One of the dogs whose blood was withdrawn until he was extremely weak, recovered his strength instantly upon being supplied with blood from a calf.

Lower describes his method in detail as follows: "First take up the carotid artery of the dog or other animal, whose blood is to be transfused into another of the same or different kind, and separate it from the nerve of the 8th pair, and lay it bare above an inch. Then make a strong ligature on the upper part of the artery not to be united again: But an inch below, viz. towards the heart, make another ligature of a running knot, which may be loosened or fastened as there shall be occasion. Having made these two knots, draw two threads under the artery between the two ligatures; and then open the artery, and put in a quill, and tie the artery upon the quill very fast by those two threads, and stop the quill with a stick. After this, make bare the jugular vein, in the other dog, about an inch and a half long: and at each end make a ligature with a running knot, and in the space between the two running knots draw under the vein two threads as in the other: Then make an incision in the vein, and put into it two quills, one into the descendent part of the vein, to receive the blood from the other dog, and carry it to the heart: and the other quill put into the other part of the jugular vein (which comes from the head) out of which, the second dog's own blood must run in the dishes. These two quills being put in and tied fast, stop them with a stick, till there be occasion to open them. All things being thus prepared, fasten the dogs on their sides towards one another so conveniently, that the quills may go into each other. After that unstop the quill that goes down into the first dog's jugular vein, and the other quill coming out of the other dog's artery; and by the help of two or three other quills, put into each other, according as there shall be occasion, insert them into one another. Then slip the running knots, and immediately the blood runs through the quills, as through an artery, very impetuously. And immediately, as the blood runs into the dog, unstop the other quills, coming out of the upper part of his jugular vein (a ligature being first made about his neck, or

else his other jugular vein being compressed by one's finger) and let his own blood run at the same time into dishes (not constantly, but according as you perceive him able to bear it) till the other dog begins to cry, and faint, and fall into convulsions, and at last die by his side. Then take out both quills out of the dog's jugular vein, and tie the running knot fast, and cut the vein asunder (which you may do without any harm to the dog, one jugular vein being sufficient to convey all the blood from the head and upper parts, by reason of a large anastomosis, whereby both the jugular veins meet the larynx). This done, sew up the skin, and dismiss him, and the dog will leap from the table, and shake himself, and run away as if nothing ailed him.

"Or, instead of a quill, take a small crooked pipe of silver or brass, so slender that one end may enter into a quill; and having at the other end, that is to enter into the vein and artery, a small knob, and for the better fastening them to it with a thread; for this is much more easy to be managed than a quill."

There is much interesting material in Dr. Lower's article. He reports, in one instance, the cure of a mangy dog in ten days after transfusions with blood from a healthy dog; in another, the transfusion of a dog for acute anemia following splenectomy with hemorrhage. Many transfusions were done from one species to another. He reports the transfusion of blood into human veins by Dr. Arthur Coga, November 23, 1667, when 7 ounces were withdrawn from the man, then by means of the Lower "pipe" joining was made to the artery of a sheep; transfusion continued for two minutes during which time about 9 or 10 ounces were transfused into the patient's veins. His condition was good during the operation and he afterward "found himself very well." He reports, also, experiments with non-coagulates, such as spirits of sal ammoniac. Dr. Lower died in 1691 and his experiments have been repeated by Sir Edmund King, Thomas Coxe, Gayant and Denys.

Previous to the France-Prussian war there was a long interval during which transfusion received almost no attention, having seemingly fallen into disrepute. At the time of this war, and afterward, transfusion was again attempted but finally given up. Between 1850 and 1875, however, many transfusion experiments were being carried on in the laboratory of Greifswald. In Hamburg Leisrink was working, also, with transfusion. The work in Greifswald was performed by Eulenburg and Landois. The latter devised an apparatus for direct transfu-

sion by means of cannulas and tubing. In 1875 he published a monograph on "*Die Transfusion des Blutes*."

Dr. William Halsted gives us the first article in this country along this line. He reports several cases of carbon-monoxide poisoning treated by transfusion or refusion of blood. "Refusion of blood is literally a depletory transfusion in which the blood withdrawn is returned to the circulation of the loser." Dr. Halsted would first draw the blood, defibrinate it, and then re-inject it into the patient. As to the best methods of infusing into the circulation good authorities disagree. There are four possible methods of infusion: centrifugally or centripetally into an artery or vein. Although to von Graefe is given the honor of being the first to draw attention to centrifugal arterial transfusion, Hueter deserves the credit of having introduced it to the profession and strongly advocated the method. His arguments for peripheral or centrifugal arterial transfusion are that the blood courses slower and more uniformly to the heart and the danger of phlebitis is avoided. Landois adds to these advantages, maintaining that the capillary system, like a supplementary filter, catches all foreign articles which may be present. Kümmler, Schede's assistant, produced gangrene of the hand by the centrifugal infusion of a saline solution into the radial artery.

The above arguments hold good for centripetal as well as centrifugal arterial transfusion. Dr. Halsted advocated the centripetal arterial infusion.

The syringe method of transfusion which we have been using for the past year was perfected by Lindeman. This method was first reported in 1892 by Prof. H. von Ziemssen, Director of the Medical Clinic in Munich, who at first injected whole blood subcutaneously, using from 300 to 450 cc. of blood at an injection, resulting in a very painful procedure. He used vigorous massage for fifteen minutes. Hemoglobin would be increased from 10 to 15 per cent. but he reports no fever and no hemoglobinuria in these cases. He then devised the syringe method. Following intravenous infusion he occasionally had rise of temperature and chill but in no case hemoglobinuria. No evidence of hemolysis or free hemoglobin ever were found in the blood serum; nor did he have phlebitis, or secondary thrombosis. He first raised the question of whether the often repeated transfusion in the bad progressive anemias might have a use, and suggests the possibility that, by repeated transfusions a real cure might result in some of these cases. He reports the case of a patient, a



woman, thirty-eight years old, whom he transfused seven times with marked benefit each time and raise of hemoglobin. As a result of experiments, he concluded that salt infusion was of benefit only for a short time.

The next great steps in this country were made chiefly in the simplification of the technic and making more sure of success in transferring a sufficient quantity of blood from the donor to the recipient. Carrel in his work (also Crile with his cannula) brought forth new interest along the line of direct successful end to end suture of blood vessels. Previous to this time, excepting in the work of Ziemssen, there was no certainty that the blood would enter the veins of the recipient. During recent years multitudes of cannulas and methods of suture have been devised which have eliminated the danger of clotting and subsequent embolism.

#### BRIEF REPORT OF SUTURES AND CANNULAS.

The success of Carrel depended upon the most rigid aseptic technic, the prevention of blood clotting in the wound or in the severed blood vessels during the operation by means of careful hemostasis and saline irrigation. His manual dexterity, fine needles and suture materials and exact approximation of intima and media were also important factors. Then came the Crile cannula with the principle of everting one vessel over a hollow cylinder and inserting this in the recipient vessel. In this method the intima coats are brought together and there are no raw surfaces. Following this there came a number of imitations with improvements, the best of these being the Elsberg cannula. Sauerbruch and Hartwell devised a method of slipping the ends of the artery directly into the end of the vein. This was fairly successful. Levin, Janeway, Soresi and McGrath have methods more or less similar, the vessels being everted over hollow cylinder, then brought together directly end on, by sliding the two parts on a little track or by the closing of a clamp.

In all these methods, however, there is considerable inconvenience to both donor and recipient. The amount of blood cannot be determined absolutely excepting, perhaps, by methods suggested by Libman and Ottenberg. Oftentimes the artery would go into a spasm from which it would not recover for half an hour or more, allowing a very small quantity of blood to pass through. This sometimes would be overcome by irrigations of hot salt solution.

Then come the indirect methods: the blood, while being transferred came into contact with the walls of the cannula, with a receptacle, with

a needle or with the syringe. Dr. Lower performed the first in 1666; Denys the first from man to man, in France, by means of quills described elsewhere in this paper. About 1860, Landois used the rubber tubes. These methods were probably unsatisfactory. In 1909, Brewer and Leggett used simple glass tubes coated with paraffin extending from vessel of donor to vessel of recipient. This was a very good and efficient method. Pope modified it somewhat with a rubber tube between two glass cannulas. Bernheim used the silver cannula: one half fitting in the artery of the donor; the other in the vein of the recipient—one cannula then fits into the other, completing the connection.

#### BLOOD WITHDRAWN AND RE-INJECTED.

For the prevention of clotting, most methods depend on paraffin-coated receptacles, as of Curtis and David, 1911. Kimpton and Brown, Satterlee and Hooper and Percy, developed methods for measuring the blood and then re-injecting it. At first these were all without the addition of any foreign element. The best of these methods is apparently that devised by Kimpton and Brown as the blood can be withdrawn in one room and taken into another for injection into a recipient.

The syringe method marks the greatest advance that has been made in solving the technical difficulties of transfusion. It is so easy and so simple, without any inconvenience to either donor or recipient, that it is almost ideal. It is yet to be determined whether ultimately only one syringe or a number of them will be used. Ziemssen used a number of needles which were placed directly in the veins of the recipient and donor and he found that the needle could be stuck again into the vein at the same place. He advised at least three 25 cc. syringes and two or three assistants. The syringe was filled with blood withdrawn from donor and injected directly into the recipient. While this injection was being made, the second syringe was being filled. When the first syringe was emptied of its blood it was immediately washed out in normal salt solution by an assistant so that a continuous transfusion was going on. His average transfusion was from 200 to 300 cc.

Lindeman reported his elaboration of this method in 1913 before the New York Academy of Medicine, describing improved needles and the use of more syringes. Lindeman's revival was apparently a great advance.

Among recent devices reported in which but one syringe is used, may be noted the method of Watt, not reported, in Dr. Halsted's Clinic,

and of Kush, Bernheim, Cooley and Vaughan, and then later of Unger in New York. With the Unger apparatus, which is probably the best, a continuous injection of salt solution is made through the apparatus so that the blood does not have time to clot in it, while the syringe is kept cool by means of ether spray which also retards clotting. There is very little danger of any infection being carried from recipient to donor.

#### HERUDIN AND SODIUM CITRATE, PLASMAPHAERESIS METHODS.

At the same time work was being carried on to find a mechanical way of preventing clotting during transfusion, experiments were being performed on a chemical basis, for if the clotting could be prevented by a chemical, the difficulty of transfusion would immediately be solved. The two chemicals most used have been herudin and sodium citrate. The plasmapheresis method is the result of extensive work carried on by Dr. Abel of Baltimore and I have tried it in one patient with uremia. Blood was withdrawn from the patient into receptacles containing herudin. These receptacles were taken some distance to the laboratory. The red corpuscles were separated from the plasma then brought back to the operating room and re-injected into the patient in normal salt solution.

The herudin and sodium citrate methods are very successful and have the advantage that blood may be kept for some time, even four or five days, on ice and then be injected into the recipient. Satterlee and Hooper in New York, during 1914, reported favorably on the herudin method, while the sodium citrate method was reported by three workers almost simultaneously, early in 1915, the first being by Hustin, from Brussels, then in this country by Weil and then Lewisohn.

The objection first made was that the use of any drug to delay coagulation time would contraindicate the transfusion, as in a great many cases where transfusion is indicated, there is already bleeding with increased coagulation time. With exalate and citrate solutions the calcium of the blood is fixed and the calcium is a necessary factor in spontaneous coagulation. Continued use of the method, however, apparently has shown that the coagulation time of the recipient is not lengthened but is actually shortened. This is hard to explain.

*Defibrinated Blood.*—Undoubtedly the injection of defibrinated blood has saved lives and done a great deal of good. The reaction, however, with chill and high fever after its injection,

as occurs in so many cases, would indicate that the method should be abolished, giving way to the very successful syringe and citrate methods.

The work of Dr. Halsted in 1882 and the work of Dr. Moss with defibrinated blood should not be forgotten. Dr. Halsted concluded from his work with the cases of gas poisoning that the depletion and not the refusion was the most beneficial.

#### HEMOLYSIS.

Without doubt transfusion would now have a far different standing in the world had there been only the mechanical difficulties of transfusion to be overcome. Discredit must repeatedly have been thrown on the procedure by the accidents due to hemolysis often accompanied by death. It was Landois who first showed that the serum of one animal may have the property of destroying the red blood cells in another. Hayem reported that in a transfusion from an ox to a dog, a serious condition resulted, resembling purpura hemorrhagica, death occurring in a few hours. He says "The effect of a foreign cell on the circulating blood is such that the latter immediately becomes finely clotted and carries the thousands of clots into the small vessels and one sees innumerable infarcts formed." We will not discuss in this paper the development of knowledge in this line nor the serological tests which have become so essential.

These laboratory tests fell into great disfavor about eight or nine years ago by men doing transfusion. It was the common saying that hemolysis or agglutination might occur *in vitro* but not *in vivo* and vice versa. I, too, assumed this attitude and while in New York good fortune was on my side and I had no serious accidents. Later, however, the great importance of these tests was fully apprehended and I will never again consent to do a transfusion except under the most extreme urgency without the reports on laboratory tests. I firmly believe now that such tests should be negative at the end of one hour, or if possible, a longer observation—never less. The earlier tests probably were not allowed to run long enough. Careful and accurate examinations eliminate all possibility of infection with any transmissible disease by transfusion.

Transfusion has been tried in the following types of cases: pernicious anemia, illuminating gas poisoning, exophthalmic goitre, hemophilia, toxemia, shock, hemorrhage, leukemia, septicemia, purpura hemorrhagica, malnutrition, endocarditis, intoxication, general debility, dysen-



tery, typhoid fever, infectious diseases, melena neanatorum, scarlet fever, pellagra, tuberculosis and tumors. It has also been used for vaccinating purposes. The best results have been obtained in the cases of hemophiliacs and babies with melena neanatorum; in the latter it is a specific and in the former it stops the bleeding immediately, although without curing the disease. It is beneficial in all anemias and may be still more beneficial in primary anemias with proper regulation. In shock it has been disappointing; this may be due to the fact that the condition has progressed too far before the transfusion is done. I would advise a very early transfusion in cases of shock. Transfusion is of the greatest benefit following acute and prolonged hemorrhages. For gas poisoning, bleeding is of great benefit as pointed out by Halsted. Depletion followed by injections of saline solution is as good, if not better, than transfusion. In tuberculosis there has been slight benefit and, so far, nothing has been accomplished in malignant diseases in the human by transfusion.

There is a great field still undeveloped along the line of vaccinating transfusion. My experiences in typhoid fever have been very successful. In cases of very ill typhoid patients, it would be most desirable to have a series of donors who recently have had typhoid fever. Very marked improvement followed transfusion with blood from a patient who previously had had typhoid fever, in the case of a patient depleted by hemorrhages as well as having a high grade toxemia; his temperature dropped to normal and the hemorrhage ceased, with a temporary disappearance of the toxemia.

The above is very suggestive of the good that might be accomplished by transfusing typhoid fever patients with blood from patients who have recently had the disease and who have probably high grade immunity. It would be extremely interesting to try this type of transfusion in patients with other diseases and perhaps be very beneficial to the patient.

NOTE: A fairly complete list of bibliographies, explanatory notes, etc. may be found in the paper "Transfusion of Blood: History, Methods, Dangers, Preliminary Tests, Present Status, Report of One Hundred and Fifty Transfusions" in the Johns Hopkins Bulletin, March, 1917 by R. D. McClure and George Robert Dunn.

#### REPORT OF TRANSFUSIONS.

We have done 150 transfusions for 80 patients, as shown in the following table:

Group of cases	Cases	Transfusions
1. Pernicious Anemia <sup>1</sup> .....	17	64

1. McClure, Roy D., M.D. Pernicious Anemia Treated by Splenectomy and Systematic Often-Repeated Transfusion of Blood. Transfusion in Benzol Poisoning, J. Am. M. Ass., Sept. 9, 1916.

2. Secondary Anemia .....	19	23
3. Hemophilia .....	2	5
4. Shock .....	2	2
5. Hemorrhage .....	6	6
6. Leukemia .....	5	6
7. Intoxications .....	7	9
8. Septicemia .....	3	11
9. Dysentery .....	1	1
10. Typhoid Fever .....	4	6
11. Other Infections .....	5	5
12. Purpura Hemorrhagica .....	1	1
13. Benzol Poisoning .....	3	8
14. Tumors (Carcinoma) .....	5	5
	<hr/> 80	<hr/> 152
Not Successful (Early Days, Direct Method) .....	2	2
Cases.....	78	Transfus 150

The transfusions which we were doing were, of course, more or less experimental. The field where transfusions are indicated is not definite as yet. We did 75 in pernicious anemia. In eight of these cases we did a splenectomy along with the transfusion. Some of those patients are living now, three years or more. What started us along this line was that we had some patients with benzol poisoning whom we transfused and they died. One patient's family insisted that we keep on transfusing. We were doing then blood vessel anastomosis transfusion. We did perhaps six transfusions on this one girl. At one time she was in coma. She recovered completely. In pernicious anemia you probably all have seen the marked benefit immediately after transfusion. And then after a time you will see that the patient gradually goes down hill again. If you transfuse repeatedly you can get the patient's hemoglobin up to 80 or 90 per cent. Then it is perfectly safe to take out the spleen. Then if you keep on with the transfusions you will notice a marked benefit. I feel that if you could take a pernicious anemia patient and get enough donors to keep the patient's blood over 80 per cent. after a few years one could cure pernicious anemia. I just had a letter from a man where the onset of the disease was three years ago. After three years he has had no remissions. He had about fifteen transfusions with several gallons of blood all told.

Another interesting field is the transfusion of people with acute diseases, typhoid fever patients, with blood of patients who have had the disease recently. Two years ago we had a medical student who was having very severe hemorrhages. We transfused him with the blood of a patient who had had typhoid fever six years before. His temperature immediately dropped

and the hemorrhage stopped for three days. We did another transfusion and then his temperature went down and stayed normal. So it seems to me that there are great fields for transfusion, especially in this line.

#### DISCUSSION.

DR. JOHN W. CHURCHMAN:<sup>2</sup> I would like in this connection to mention a case which I think is absolutely unique in medical literature, showing what is a well-known danger of transfusion, and also showing the clinical proof of experimental work done some years ago in Europe. This patient was a pernicious anemia case brought to one of the largest university clinics in the east and transfused several times with great improvement. He was so much improved that he was to be sent home. Previous to the transfusion of blood in each instance, the blood had been tested out in the usual way for hemolysins and also the Wassermann reaction had been done. The final transfusion was done from his son, the blood being tested out for hemolysins but no Wassermann was done. The danger of the transmission of syphilis was explained to the son and he said that he had never had the disease. The patient improved after the transfusion and went home. About six weeks later he wrote to the hospital that he had had a peculiar rash and wanted to come up to see about. He was sent for and came up with a perfectly typical secondary syphilide. The son was then sent for and confessed that at the time the transfusion was done he had a primary luetic infection. So that you have here certainly the only human case of demonstrable transmission by the blood of lues, which, of course, confirms the experimental work of Neisser on monkeys and illustrates, of course, that no chance should be taken in this respect. The rather amusing sequel of this story is that the son is now threatening to sue the Hospital for having given his father lues.

DR. NELLIS B. FOSTER: I am very much interested in Dr. McClure's paper and I am sure we are much indebted to him for coming here and giving it to us. Some of the early instances of transfusion were known to me. The one in Pepys's diary I remember of calling to the attention of an investigator in New York City and he hasn't spoken to me since. In a few pages later Pepys says that the dog is doing well. I was also interested that he brought up the early work of Dr. Halsted at the New York Hospital, the gas cases.

Then on the practical side I was particularly interested in what Dr. McClure has to say in regard to pernicious anemia because I think that we are, in clinical medicine, feeling more and more that that is about the only means which we have for the immediate treatment of such cases. They are in a certain sense, emergency cases and something must be done rather promptly if we expect to tide the patient over a critical period. In New York trans-

fusion is coming more and more in vogue. We all felt a great deal of reserve about drawing deductions as to the ultimate utility of the method, but there was not much question as to the immediate utility. Here we are beginning to transfuse these cases. We have a peculiar problem in the way of finding donors and we have a little campaign going on now to try to get a number of healthy men in the town and get them grouped according to their tests and have them available to the clinic upon call; and, of course, in a small town like this, that is quite a problem. In the cases which I have seen transfused, only a very few have had the spleen removed, and I would like to ask Dr. McClure if in his experience he thinks that is a necessary part of the procedure in order to get the favorable results which he has noticed. Many cases in my experience have had a favorable outcome with splenectomy. Perhaps there was a favorable result in spite of the fact that the spleen in the majority of the cases was not removed. There was a feeling in the New York Hospital rather antagonistic to splenectomy in pernicious anemia. They did wholesale splenectomy in other cases.

DR. CYRENUS G. DARLING: In reference to transfusion in pernicious anemia, we had two cases in our clinic last year where transfusion was done and the spleen removed. Both of these cases left the Hospital apparently well. Of course, it is too short a time to say that they will remain well. In fact, they were turned over to the medical clinic for further observation and I suppose Dr. Foster has them under observation and will report the results later.

DR. CARL D. CAMP: I would like to ask a question as to what is the particular advantage of transfusion of blood over the injection of normal saline solution. I have seen, in cases of Asiatic cholera in Russia, a very marked benefit occur from intravenous injection of large quantities of normal saline, and I have heard, though I have never seen it, that the same beneficial effect was obtained in some cases of typhoid fever. The doctor's statement that possibly his blood transfusions acted by elimination of a toxin, would suggest that possibly a normal saline would do as well.

DR. MCCLURE: I will take the last question first. A good many of the cases were transfused in our series for hemorrhage, either hemophiliacs or bleeding in leukemia, or in benzol poisoning, and sometimes the hemoglobin was 14 or 15 per cent. The blood is so very thin and watery in such cases that I feel that the transfusion of the saline probably would not stop the hemorrhage. It is true that in those cases of great anemia the symptoms do not seem to be due to the lack of oxygen-carrying power as there is no cyanosis, but it seems that by transfusion you are replacing that which is missing, and if you can do that with blood, we feel that it is better than saline infusion.

As to splenectomy connected with transfusion in pernicious anemia, we have had eight cases. Some of those patients are dead. Those patients were not transfused systematically from the beginning. The patients which we have kept alive are the ones which we have followed carefully, and as soon as they showed any symptoms of a relapse, we had them come back to the hospital and we gave them systematic transfusion.

2. I am much interested in the remarks of Dr. Churchman, I believed that I had reported the first case of syphilis transmitted by transfusion of blood at the 1916 meeting of the American Medical Association. (See *Pernicious Anemia Treated by Splenectomy and Systematic, Often-Repeated Transfusions of Blood. Transfusion in Benzol Poisoning*, by Roy D. McClure, M.D., *Jour. Am. Med. Ass.*, Sept. 9, 1916, Vol. LXVII, pp. 793-796). The circumstances in the case reported by me were very similar to those mentioned by Dr. Churchman.



## RADIOGRAPHIC FINDINGS OF THE MONTH.

JAMES G. VAN ZWALUWENBURG, M.D.

(From the X-ray Clinic, University Hospital, Ann Arbor, Michigan.)

Case showing closing over the canal which carries the suboccipital nerve and the vertebral artery.

Case of osseous overgrowth on the back of the head. Two plates. Periosteal sarcomata.

Case of malignant psammoma of the frontal bone following trauma.

Case of brain tumor.

Case of correction of fracture of the neck of femur by driving in one nail. Bony ankylosis between the head of the femur and acetabulum, and motion about the nail as an axis.

Case of absence of spinous processes from the fourth lumbar to second sacral. Spina bifida.

Case of localized spondylitis, one side of the intervertebral disc with the formation of osteophytes on the lips. Typhoid spine.

Case of impacted fracture of the head of the humerus, treated for "rheumatism." Traumatic.

Case of old hypertrophic arthritis suing for damages. Not traumatic.

Case of "rheumatism" of the foot. Atrophic arthritis.

Case of abscess cavities in the mastoid processes.

Two cases of foreign bodies in the knee joint.

Case of inoperable carcinoma of the stomach without symptoms.

Case of perforating ulcer on the lesser curvature of the stomach.

Case of hepatic flexure, snared off by adhesions simulating diverticulum.

Case of man with four attacks of renal colic. Loss of weight. Very few gastric symptoms. Stomach shows persistent defect in the greater curvature. Possibly an extragastric mass beginning to infiltrate the stomach, possibly hypernephroma. (On exploration, carcinoma of left lobe of liver).

Case of enormous dilatation of the heart.

Case of aneurism.

Case of nursing mother with clinical tuberculosis of the breast. Clinical examination of the thorax negative. Undoubted tuberculous process radiographically.

Case of hard tumor of the neck showing two large masses within the thorax. Probably metastatic malignancy, either sarcoma, carcinoma of the kidney or thyroid. Man has kidney symptoms. Probably hypernephroma with metastases.

Three plates showing hyperemia in the lung.

\*(See notes.)

Case of unerupted canine tooth.

\*These three plates are of exceptional interest in demonstrating the importance of the vascular component of the bronchovascular tree. The first plate was taken immediately after the first symptoms (pleural pain) arose, and demonstrated very clearly stereoscopically an exaggeration of the "bronchial tree" over a wedge shaped area, with the base at the pleural margin and the apex at the hilus in the mid thorax. The remainder of the "bronchial tree" appeared everywhere normal. In our notes on the case, it was assumed that these shadows were due to active dilatation of the pulmonary vessels, and in the absence of distinct indications of pleural disease, it was assumed that they were the first signs of a pneumonia. It seemed improbable that so distinct an alteration should result from anything but rather extensive parenchymatous infection.

The second plate was made about a week later and now demonstrated the presence of moderate sized effusion in the pleura, naturally in the lower portion but the region under suspicion was more or less obscured by the secondary processes, effusion and the compression.

The third plate after the recovery of the patient shows the entire disappearance of all evidence of effusion and of all evidence of vascular dilatation. To our mind this confirms the conclusions we have already previously reached with respect to the importance of blood volume in the shadow which is cast by the lung, and we believe that more careful attention to this phenomenon will sometime lead to the possibility of differentiation between increases in the bronchial tree due to peribronchial thickening or infiltration and vascular conditions, and even to the differentiation of the type of vascular reaction in a given area.

This problem has a distinct bearing on the diagnosis of early tuberculosis in which it not infrequently happens that the only demonstrable change is an increase in the development of the bronchovascular tree in either one or the other of the apices. It has usually been held that this is due to a tuberculous infiltration of the perivascular lymphatic structures of the lung tissue. It is difficult to harmonize this conception of the pathology with the observation that these shadows not infrequently clear up with the improvement of the patient. We think it much more likely that they represent the vascular reaction to the infection in the territory supplied by these vessels.

# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman ..... Owosso  
 Guy L. Klefer ..... Detroit  
 W. J. Kay ..... Lapeer  
 W. J. DuBois ..... Grand Rapids

### EDITOR

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 Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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April.

### Editorials

#### SPECIFICS—ONE SWALLOW DOES NOT DENOTE SUMMER.

The following two contributions to the *American Journal of Clinical Medicine* from a Detroit physician represent a deplorable scientific viewpoint.

##### INCIPIENT CANCER OF THE BREAST.

Yesterday I was called to see a married woman, 37 years of age, and found her suffering great pain in the left breast. There was no enlargement or swelling, but she told me that great waves of pain passed through the gland and that these weakened and sickened her. It seemed, she said, as if a great hand with fingers like needles were grasping and pressing the breast. There was no evidence of chills or rise of temperature. She told me of several miscarriages and two curetments, and of having lost flesh and strength lately. This, coupled with reverses in finances, has caused great mental depression.

The only objective symptom noticeable was the very striking appearance of the tip, or apex, of the nipple—that is, the area surrounding the milk-ducts—the latter appearing like the center of a flower, of the pinkest red that I ever saw. The other breast was normal.

The patient is a trained nurse from New York City, has nursed in Missouri (St. Louis), in Michigan, and in other states. She expected, of course, that I should give an injection of morphine, for the paroxysms of pain were simply unbearable.

Seeing that this was the first manifestation of a cancer of the breast, I put her on the following treatment: One granule of glonoin (1-250 grain), to be crushed between the front teeth and allowed to be absorbed from the mouth. Immediately after and taken in the same way, two granules of hyoscyamine of 1-250 grain each. This, by the way, is proper treatment in any case of sickness, as it dilates the capillaries and prevents concentration of blood at any one point. Immediately after that, and at 5-minute intervals, 1-10 grain calomel tablets were given, allowed to disintegrate, and not washed down with water. Then she had to take, at once, one tablespoonful of epsom salt in a teacupful of hot water, followed by a glass of cold water.

Calomel and a laxative saline or the abundant liquid flush-out of the bowel, which is nature's drainage river.

Now for the specific treatment—the preceding was but preparatory. I put five drops of mother tincture of pulsatilla into half a glassful of water. This for the cancerous condition itself. In another glass, half full of water, I put five drops of tincture of nux vomica. This for its tonic action. (You may smile over the smallness of these doses!) Then the patient was instructed to take one teaspoonful of each mixture, alternately, every half hour.

Result: In sixteen hours, all pain is gone, the nipple is normal in color, the patient is feeling fine.

Had there been enlarged glands or hardness of the breast or axillary glands, I should have added phytolacca to the foregoing. In the incipency of cancer you will find that pulsatilla will disperse the gathering storm.

These things are worth looking into.

Test them—test them—and let the results tell their own story!

Do not forget, though, that the patient must be watched and safeguarded while the cancer-medicine is being given.

#### QUICK RELIEF FROM GALLSTONES.

Just now there came into my office a school teacher, lady or perhaps 28 years, who was suffering from an attack of gallstone-colic. The pain was almost unbearable; she could neither sit nor lie down, but continued walking about and moaning. She was taken suddenly on the street, had vomited frequently, and, being a stranger here, had called upon the first physician she could find. She explained that she had been operated upon for gallstones six years ago, when two very large and some small ones were removed, and that she had not had an attack in several years.

She fully expected that I would have to give her chloroform or an injection of morphine; in which, however, she was mistaken. Instead, I caused her to chew between the front teeth one granule of nitroglycerin (glonoin) of 1-250 grain, and immediately afterward two granules of hyoscyamine of 1-250 grain each. In five minutes, I repeated this dosage. Also, I dissolved in a teacupful of very hot water 10 grains of magnesium phosphate 3x and gave her of this one teaspoonful every five minutes. In less than half an hour, the woman was free from pain and went happily on her way.

Score another victory for the granules!

Sixteen hours accomplishing the relief of all clinical symptoms of a pre-cancerous breast, by the use of nitroglycerine, hyoscyamine, calomel, salts, pulsatilla, tr. nucis vomica!! (Sic). Either it wasn't cancer or if cancer the result reported at best was but transitory. This dilly-dallying with medical treatment is what maintains the high death rate from the disease. When will professional men cease to be deluded and terminate their effort to render medical treatment for a condition in which early and prompt surgical intervention is the sole source of safety?

Nitroglycerine, hyoscyamine, magnesium phosphate 3x relief par excellence for gallstone colic!! The stone passed out of the duct and relief followed but was not solely accomplished by the medicines administered. Everyone has seen these attacks pass off in ten minutes to a half hour without medication. Why then burst forth into print proclaiming a specific method of treatment. We see no particular victory, but rather cause for regret.

We wonder that the editor endorsed, by pub-



lishing, these comments. To publish them would not have been amiss had the opportunity been grasped to enlighten the author and readers who may be led astray by such unreliable, unfounded statements. If the doctor can submit a group of 100 to 500 cases of precancerous or early cancer of the breast to whom the treatment was administered and five years elapsing without symptoms, then might he be justified in making a claim for effective, specific treatment. One case means nothing and we deplore the abetment of such allegations.

Speed the day when we shall be relieved and freed of these delusions influencing the minds of men who, if they will but employ the time to do so, might familiarize themselves with scientific facts and truths.

Too many similar reports are finding their way into medical publications. We believe that a permanent blockade is demanded.

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#### FIFTY-SECOND ANNUAL MEETING— BATTLE CREEK, SEPT. 4, 5, 6.

The Scientific Committee met in Battle Creek, March 6, to outline and perfect the program for our Fifty-Second Annual Meeting to be held September 4, 5 and 6. The entire committee was present and in addition President Biddle and the State Secretary. The place for holding the several sessions, the Masonic Temple, was visited and section rooms allotted. The facilities afforded in this building make it possible to hold all sessions under one roof. The rooms are commodious, airy and excellently adaptable to our use with splendid lantern facilities. The main auditorium will seat 800 people.

Several hours were spent in discussing section program features. While it is not deemed expedient to impart advance information at this time we can give the assurance that the plans and features determined upon by the Committee warrant our stating that never in our history has there been such an attractive, instructive and profitable program as this one that is now being rounded to completion. It is going to forcibly command the attention and interest of our members. It is going to be one that no member can afford to miss. The custom of previous years has been altered and the innova-

tion to be presented cannot help but awaken new interest and receive approval. More of that and the details in a later issue.

The local committee is planning equally attractive and delightful entertainment features. To a man they are bending every effort and will afford those in attendance a taste of true hospitality.

It is up to you, member, to talk, plan, think about this meeting. You simply have got to be there because you cannot afford to miss this meeting. It should be your watchword: Battle Creek, September 4, 5 and 6.

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#### PREPAREDNESS.

The Medical Department of our Army has made the whole world a debtor. It was an army surgeon who slew the hookworm in Porto Rico; it was an army man who fought to the death with yellow fever in Havana and conquered it; it was an army man who made the disease-breeding swamps of Panama into a zone of health; it was an army man who perfected camp sanitation and disease prevention during mobilization. And so might one continue to enumerate the world-wide influence that has followed the studies and discoveries of the men now enrolled in the medical department of our army. Noble, whole-hearted, thinking not of or for themselves but for their country and country's good. We may well be proud of our professional brothers thus serving our country. Small though the credit awarded them, great and enduring are these, their achievements.

The thought presents, Doctor, what are you doing or what do you propose to do in this crisis that now presents. You ask: "What can I do?"—Place yourself available to your country by enrolling in the Medical Reserve Corp. Write to the Surgeon-General, Washington, for the prescribed blank and information. Familiarize yourself by selected reading, with the duties of medical officers when in camp or active campaign. Become acquainted with army tactics and operations. Study the problems of camp sanitation and hygiene. Be possessed of the knowledge of medical and surgical activities in mobilization. This done you will, when needed, be able to render greater and efficient service. You whose attachments

are light and not deeply rooted, we urge that you consider enlistment to fill the vacancies that exist in the army and navy medical corps. Your country needs NOW men who will enter this service. Many vacancies exist and recruits must be obtained from the profession at large.

To some the need may seem small with the urgency of the necessity lost to view. You may not realize the absolute demand that imperatively calls for professional recruits. The crisis is of far more reaching seriousness than many of you believe. Our Country, *your* Country needs Doctors now. Michigan must promptly respond to call and we Doctors must assume our part.

God forbid that you stand idly by until the hour has struck, when the foe is at our door and we medical men have failed to do our part to be prepared for the dire eventualities that will surely follow. The responsibility is graver than many are inclined to realize. We must awaken from our lethargy.

God of our fathers, known to all—  
 Lord of our far-flung battle-line—  
 Beneath whose awful Hand we hold  
 Dominion over palm and pine—  
 Lord God of Hosts, be with us yet,  
 Lest we forget—lest we forget!

For heathen heart that puts her trust  
 in reeking tube and iron shard—  
 All valiant dust that builds on dust,  
 And guarding calls on Thee to guard—  
 For frantic boast and foolish word,  
 Thy mercy on Thy people, Lord!

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#### LAPSED MEMBERSHIP.

April First ends the period of grace for the payment of *Society Dues*. He who has neglected to pay his current dues is automatically suspended and the name is removed from our mailing list; medico-legal defense is likewise forfeited and action brought for alleged professional neglect during the period of suspension will not be defended at any future time.

We dislike to be compelled to harp upon this

subject or keep "poking" the delinquent. We would be negligent if we did not issue a warning notice, so here it is: *Membership Dues unremitted by April First causes your suspension. Remit to your County Secretary today.*

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#### Editorial Comments

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This issue contains an extended list of book reviews. It is impossible to devote a large amount of space to the review of the many excellent books that are appearing from month to month. Our purpose is to but indicate the general scope and trend of each volume and here and there emphasize special features. Although often tempted to devote extended space to some texts we are compelled to desist because it would simply lead to a reviewing department occupying half of our publication.

We do not pose as a bibliomaniac yet we are warmed with admiration and impressed with the value of many of the new texts that confront us. The wish is often voiced that we would it were possible for every Michigan physician to secure, read and apply the material imparted in these publications. Especially do we urge our readers to secure as many of these new publications as their funds will permit and acquire the habit of devoting one, two or three hours to daily reading.

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Next month we will endeavor to review the enactment of this year's session of the legislature in so far as they pertain to the profession, medical and public health matters.

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Our medical colleges are commencing to advertise their spring and summer courses. Until one has participated in these courses he does not fully realize their value. We suggest that you arrange your summer plans so that it will be possible to pursue some clinical course and we prophesy that you will not regret the time devoted.

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Our Fifty-Second Annual Meeting to be held in Battle Creek, Sept. 4, 5 and 6 will assuredly



be a most noted and profitable one. The Scientific Committee has arranged for a most up-to-date, live program. The sessions of our sections are going to be crammed-full of excellent papers and discussions. You simply cannot afford to miss this meeting.

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Dakin's solution has become to be so widely used that we wonder at times if it is wisely employed. To secure the greatest good, certain essentials are important: A properly compounded, neutral solution; a fresh solution not older than three days; the wound or infected part must be provided with free and ample drainage outlets; the solution must be constantly employed, or better, every nook and corner of the wound thoroughly flushed with it every two hours; re-infection must be prevented by protective dressings and dressings renewed by using sterile instruments and gloved hands. Carrel's technic rigidly observed produces really wonderful results. He who masters this technic may approach infectious processes with greater confidence and assurance.

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Did you read the proposed new feature of membership—Group Life Insurance—as announced in our March issue? Have you expressed your views upon the subject to your State Secretary? If not you are urged to turn to our last issue, read the suggested plan and then write us your opinion.

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We would all be specialists—impressive title—but let's first be true to our patients and to ourselves. If we are general practitioners why not be honest and admit it and strive to be and remain in the class of the best general practitioners. If we pose as specialists, likewise let's strive to be actually the best specialist in our chosen field and exert ourselves to so perfect ourselves and devote our sole time to our specialty and not dabble beyond the boundary. The profession and public have but little confidence and respect for the eye man treating as a sideline mammary tumors or constipation; the pediatricist treating pneumonia or stomach troubles of adults; the gynecologist removing tonsils

in children; the surgeon attending an infant with summer complaint. We either are or are not a true specialist but why not be honest and not pose as one and then act as if the term conveyed specialistic ability in every field of medicine and surgery. To be a competent and reliable specialist one cannot dabble.

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We are really proud of our advertising section. We invite you to carefully read each advertisement. Then write to these advertisers and if you do not enclose an order at least tell them you have seen their ad. and that you appreciate their patronage of your journal.

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There must be greater individual enthusiasm and honest zeal exhibited by every medical man in Michigan if we hope to reap the fullest benefits of organized effort. There must also become evident a marked abatement of bickerings and jealous criticism if scientific medical progress is to be reflected by our schools, clinics and hospitals. Unity of purpose, success and progress for ourselves and our neighbors will not occur unless we are willing to boost every good, progressive movement even though we personally are not to be the gainer. If you whole heartedly and unreservedly boost your neighbor he in turn will boost you. But forget the: "Where Do I Come In" squawk.

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A timely subject for a medical meeting would be the discussion of your local hospital or hospitals. Does it meet up to the present day standard? Is it employing modern methods of administration? Is it capable of administering present day treatment? Are the members of the staff utilizing its clinical material? Is its training school properly conducted? How may improvements be accomplished? A free, candid, constructive consideration of the entire scope of the hospital activities in your vicinity is bound to be beneficial to the community and local physicians.

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Over \$10,000 of unsettled doctor's compensation cases alone in Detroit. brilliant the information imparted by an individual only to

acquainted with the subject. Why? He replied: "Because there are doctors who think that corporations and employers are easy-marks and will stand for 'farming-cases,' excessive charges, unnecessary operations, trumping up cases and stating that conditions are the result of injuries when in reality they are the evidence of pathological disease and for palpable deception." When asked: "Will they ever be paid in full or in part?"—the reply: "Never in full, some in part, some not at all. The amount will grow larger if the doctors do not renounce some of their present methods." A graphic situation, explanation and suggested remedy. Detroit alone does not harbor all these cases—they are state-wide.

Its been a hard, long winter. The nights have been bitter cold, the snow was deep, at times you are simply swamped. Tired, of course you are, your manner has become a little more brusque and your replies are frequently irritated snappings. It's not all your fault nor are you entirely to blame. No one can respond to the exacting calls made on a doctor and not reflect it when physical weariness reveals itself. You will, however, be culpable if you do not break away for a week or two of rest and recuperation. April is the month to do it in. Get away and into a new environment for a couple of weeks.

Sometime ago—last fall—solicitors appeared in Michigan calling on doctors with the proposition that if stock was taken in a proposed new Chicago life insurance company that the doctor would be appointed medical director for the company in that vicinity and pass on all the policies written. We noted a week ago that the promoters have been arrested and convicted of fraud upon complaint of several victims. This is but another instance of the doctors being the easy mark. When the millenium arrives, and we fear that not until then, doctors will learn that reputable bankers and stock brokers of known repute are the only avenues through which safe investments may be made. There are a goodly number of "Get-Rich-Quick Wallingford's" floating around ready and eager to

separate you from your hard earned dollars. It seems that one must be stung from one to a half-dozen times before immunity is acquired.

Everything can happen in the next hour that has ever happened. It contains all the possibilities of a universe. In the next hour children will be born, men and women will die, whole worlds will be smashed to atoms and drop out of space, and the girl you love go back on you. In the next hour the house may burn, you may quarrel with your best and dearest friend, someone may give you poison, your fortune may be stolen, the Government may change, and the world may come to an end.

You plan how you will pass the next hour and, lo! the train is ditched, the auto turns turtle, Aunt Jane arrives, the neighbor's baby has convulsions, the house is struck by lightning, your tooth begins to ache, a telegram is delivered, the wires are out of order, you are discharged, somebody dies and leaves you a fortune, you are operated upon. The next hour is what you ever were and what you ever may be compressed into sixty minutes. It is the period of hope deferred, of supreme victory, of total annihilation, and the entrance to an assured immortality. Unalterable as the law of gravity, it stands before you like the grim sphinx, containing within itself all the marvelous variety of human experience.

To know how to meet the next hour with joy, with head erect, with courage singing in your heart, is to solve the deep mystery of eternity.—"Selected."

*Your annual dues must be paid to your County Secretary before April First if you wish to remain in good standing. If you have not paid your current dues for 1917 do so at once and so avoid being placed on the suspended list.*

### Correspondence

Avon Lake, Ohio, March 12, 1917.

My Dear Dr. Warnshuis:

It will interest you to know that we have won the first legal round of the Kentucky fight.



Dr. McCormack has just notified me that "Judge Kirby, the Chancellor in Louisville, has just handed down a splendid opinion, upholding our every point in the nurse-anesthetist case."

The Attorney General will immediately pursue his advantage and take the case to the Kentucky Supreme Court for final adjudication. The case which the Attorney General will present will be all the stronger, as we now have the emphatic support of Dr. A. D. Bevan, Chairman of the A. M. A. Council on Medical Education.

Your editorial stand will presently have sufficient backing to make it impregnable.

Hoping this will be good news to you, I remain, as ever

Cordially yours,

F. H. McMECHAN, M.D.

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Big Rapids, March 14, 1917.

Dr. Warnshuis, Secretary State Medical Society,  
Grand Rapids, Mich.

Dear Doctor:

Under date of February 27, 1917, I received a letter from the Internal Revenue Collector of the Fourth District located in Grand Rapids, Michigan, which was a regular form letter evidently printed in large number and sent to a great many persons throughout the District, of which the following is a copy:

Grand Rapids, Feb. 27, 1917.

Sir:

The records of this office show that you are registered under the Harrison Narcotic Act for the four months ending June 30, 1915 and also for the twelve months ending June 30, 1917, but that you did not register for the year ending June 30, 1916. You will therefore please at once file the enclosed application and return same to this office with \$1.50.

Respectfully,

E. J. DOYLE, Collector.

As a matter of fact, I had registered under the Harrison Act for the period in question and had the license displayed in my office for something more than a month after the period covered by the license. I was surprised to learn that Dr. W. T. Dodge of this city and Dr. Geo. H. Lynch had also received similar letters.

About a month after the receipt of the new license for the term ending June 30, 1917, Dr. Dodge and myself both destroyed the old license consequently had this part of the evidence lacking. Dr. Lynch, on the contrary, merely by chance saved his and we all three replied to the letter written by the Collector. Under date of March 12, 1917, the following letter was received:

"Your letter of the 28th ult., is received, and you are advised that the records of this office do not show that you were registered under the Harrison Narcotic Act for the year ended June 30, 1916, and you will therefore please execute the enclosed application and return same with \$1.50.

Your truly,

EMANUEL J. DOYLE,  
Collector.

In spite of the fact that Dr. Lynch has his license, they still insist on his paying the second fee. In this connection it might be interesting to learn by an inquiry through the "Journal" how many doctors throughout the Fourth District received similar letters, also how many of those who received such letters still have their licenses on hand for the period in question. It seems that there is either a lax method of keeping records in their Grand Rapids office or new management should be substituted for the present officers.

As a matter of fact, both Dr. Dodge and myself have plenty of evidence that we had the licenses in question and do not propose to be imposed upon if there is any way of getting at the records of the Grand Rapids office for a thorough search.

Respectfully yours,

CLYDE F. KARSHNER.

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## Deaths

**George G. Burns, A.B., M.D.**, was born in Muskegon, Michigan, March 8, 1876, and passed on February 23, 1917, at Blodgett Memorial Hospital at Grand Rapids, Michigan, not regaining consciousness after having undergone a minor operation.

Dr. Burns possessed a personality that endeared him to his friends. When one had arrived within the inner circle of his friendship you somehow felt that that friendship was different, you felt that it was something valuable, something to be retained.

While Dr. Burns had confidence in himself yet he was modest and unassuming. His professional position in Fremont on account of his surgical successes was a flattering one to a man susceptible of adulation, but Dr. Burns could not be flattered, bought or scared.

The loss to the profession of this brilliant high souled physician is commensurate only to

the loss to the community of Dr. Burns as a citizen.

Voicing the opinion of the Nawaygo County Medical Association I can most truly say that



George G. Burns, A.B., M.D.

"he was a man take him for all in all, I shall not look upon his like again."

CHAS. B. LONG, M.D.,

Secretary-Treasurer of Nawaygo County Medical Society.

**Dr. H. Elwood Retan** died in Phoenix, Arizona, and was brought back to his home in Weston for burial.

**Dr. H. W. Heasley** who has been a practicing physician at Burnips Corners for twenty-five years died in the Harper Hospital, Detroit. At the time of his death he was a resident of Grand Rapids.

**Dr. LeRoy Weaver** died at his home in Lansing as the result of a stroke of apoplexy.

### *State News Notes*

PRACTICE—\$3,000 or better in live Southern Michigan town to purchaser of equity in modern home, office furniture and drugs at actual cost. No bonus. Good roads. Competition right. Thorough introduction and recommendation. Address O. H. Jennings, 61 Garfield Ave., Detroit, Michigan.

### DETROIT COLLEGE OF MEDICINE AND SURGERY STARTS CAMPAIGN FOR MERGER.

Plans for the amalgamation of the Detroit College of Medicine and Surgery with the University of Michigan, by which it is hoped not only to save the former institution from extinction but, as well, to provide for the extension to that city of the undergraduate work of the medical students at the Ann Arbor seat of learning, were launched Thursday afternoon.

This was the result of the special meeting of the Board of Trustees of the Detroit college in the directors' room of the First and Old national bank, called to consider the offer of the university. After an enthusiastic session, the trustees voted to accept the offer as it stood, providing for the raising of a fund of \$1,000,000 with which to greatly enlarge the equipment and the scope of the local training school.

Sidney T. Miller, chairman of the board, was empowered to appoint a special committee of five, which will immediately begin to arrange the details of the amalgamation and setting up the machinery for the \$1,000,000 fund. It is planned to make as quick a campaign as possible and it is believed that the response will be so generous that there will be little or no difficulty in obtaining the desired amount, when the needs of the institution are made known to the public spirited men and women of Detroit.

The project to amalgamate the Detroit College of Medicine with the medical school of the University of Michigan is recommended by the American Medical association and promises for this state facilities in medical education which should not be excelled anywhere in the world.

The medical school of the university has held a high standing since it was founded and is now considered one of the best in the country. Its equipment for search and clinical work is complete; its faculty is composed of leaders in their respective fields. The university has raised its standards of admission to the medical school until only the most desirable and best prepared students enter and graduate. The contemplated absorption of the Detroit college would give the work of the fifth year, in which students serve on hospital staffs, larger scope than is possible in Ann Arbor. The wide range of cases which find their way into Detroit hospitals would supply the invaluable bedside experience at its best.

The Detroit school has served its purpose well, but its perpetuation has in late years entailed a degree of hardship on the busy specialists who constitute the faculty and have kept the institution alive. It has been proposed to re-establish this school with a large endowment, which would mean the maintenance of two large, first-class schools within forty miles of each other, a wasteful duplica-



tion of effort in this day of specialization in medicine and surgery.

The dairy and food department's bill for the regulation of the patent medicine business is being grossly misrepresented. The proposal before the legislature does not aim to compel medicine makers to print the formula on the bottle, as it is claimed by opponents of the measure. The intent of the bill is best told in the words of the dairy and food commissioner, Fred L. Woodworth, in an official statement, which reads:

"The State Dairy and Food Department is charged by law with the inspection of all drugs and medicines as well as food in this state. It is made the duty of the department to find out what people put into their stomachs for medicines as well as foods. There are several thousands of proprietary remedies on the market. Many of them have merit, some are useless, and some are plain frauds, like the consumption and cancer cures. To analyze and inspect all these remedies would cost the state a great deal of money and yet the people should be protected from imposition in the medicine line.

"The State Dairy and Food Department, after careful study of the situation, drafted a bill to meet the situation fairly for all concerned. House Bill No. 187, introduced by Representative Littlejohn, is not the product of any so-called "Doctor's Trust." It was drawn by the dairy and food commissioner. No doctor except Representative Littlejohn ever saw it before it was introduced. No doctor was consulted in the drafting of it. It is being misrepresented by advertising agencies and others as a 'formula disclosure' bill. There is not a line in it compelling the disclosure of any formula. The bill simply provides that manufacturers of proprietary remedies shall register the names and furnish a sample of their product to the dairy and food commissioner. This saves the state the expense of traveling inspectors to pick up the samples. It provides that each manufacturer shall pay to the department ten dollars for the first registration and five dollars for each subsequent one to meet the cost of inspection and analysis.

"If the manufacturer wishes to avoid paying this inspection fee he can do so by disclosing his formula and thus save the Department the expense of analysis, but if he pays the inspection fee he is not obliged to disclose the formula. No manufacturer of a meritorious proprietary remedy can reasonably object to the provisions of this bill. The objections of the manufacturers of fakes should be disregarded. The bill will make conditions better for the owner of a preparation of merit. The only restriction on advertising in the bill is that advertisements of remedies claiming to cure consumption, cancer and other admitted non-curable disease, should be prohibited.

"All reputable newspapers already refuse this kind of advertising. Yearly the manufacturers of proprietary remedies take large sums from the people

of the State; most of them are located outside the State and pay no state tax. Why should they object to paying a paltry fee to reimburse the state for its inspection of their products? The bill as drawn does not affect the retail drug trade, and preparations made by the local druggist are specifically exempt under the terms of the act."—Detroit Saturday Night.

The following deaths of physicians in Michigan not members of the Society occurred during the latter part of February and March:

Dr. C. B. Chapin, Benton Harbor, Dr. George C. Gordon, 428 Lincoln Ave., Detroit; Dr. C. M. Book, Greenville; Dr. Reuben Osborne, Detroit; Dr. George C. Gordon, Detroit and Dr. Orson Millard of Flint.

Dr. J. S. Brotherhood, Grand Rapids, has withdrawn from the Grand Rapids Clinical Laboratory and announces the opening of offices in the Metz building for the application of modern diagnostic methods and consultation in internal medicine.

The Detroit Ophthalmological and Otolaryngological Club tendered a complimentary dinner on March 21 in the Statler Hotel to Dr. Eugene Smith, the dean of that specialty in Detroit. Dr. Smith has been in practice fifty-six years.

The Genesee County Society has secured the consent of the Flint Board of Education to use part of the city library for the purpose of establishing a medical library.

Dr. Reuben Peterson of Ann Arbor delivered a lecture on Military and Medical Preparedness in Michigan before the Calhoun County Society on March 6th.

Dr. F. B. Tibbals, of Detroit, who has been seriously ill is recuperating in the South and expects to resume practice in two weeks.

Dr. F. J. Smith, of Detroit, and Miss Jeanie W. Smart, of Lutherville, Md., were married on Feb. 17, 1917.

Dr. J. D. Bruce has returned to Saginaw after a four months service in British Army hospitals in England.

Dr. Wm. H. Price has resigned as health officer of the city of Detroit. Dr. J. W. Inches of St. Clair has been elected as his successor.

Dr. L. L. Burkhardt has been supplanted as Secretary of the State Board of Health by the election of Dr. Olin to that office.

Dr. Walter Parker, of Detroit, conducted an eye clinic at Alpena on March 3d.

Dr. G. H. De Nike of Buchanan was sentenced to Ionia on an indeterminate term for manslaughter, following a criminal abortion.

Dr. M. O. Blakeslee, of Jackson, has resigned as health inspector, and has removed to Ionia where he will engage in practice.

Dr. R. M. Cooley, of Jackson, has been appointed to temporarily fill the position of health inspector of the local board of health.

Dr. F. L. Rice, of Owosso, sustained serious multiple fractures of arm and leg by being struck by an interurban car.

Dr. N. J. Robbins, of Negaunee, is a candidate for mayor.

Dr. Bennets succeeds Dr. R. C. Main as health officer of Marquette.

## County Society News

### A. C. E. COUNTY

The A. C. E. County Medical Society, composing the counties of Antrim, Charlevoix and Emmet, met in regular session in the Cushman House parlors, Tuesday evening, March 13, 1917.

Dr. H. B. Armstrong of Charlevoix, President, presided. Twelve members were present. Under the head of general business, the following resolution was offered by Dr. J. J. Reycraft. Resolved, That the members of this Society, request the law covering dry territory, make it obligatory to have liquor prescriptions signed by the Prosecuting Attorney and an ordained Minister, before a druggist can, legally, fill the same."

After being supported by Dr. Howe of Boyne Falls, an earnest and spirited discussion by all present was participated in, finally terminations in a resolution, offered by Dr. Nihart to lay it on the table which was supported by Dr. Armstrong. Motion was carried.

Dr. Armstrong then read a very interesting and instructive paper on The Pathology of Acute Poliomyelitis which was well received and drew out a general and valuable discussion. Some phases of Indigestion, also received attention. Dr. Wilkinson of Charlevoix, Dr. J. J. Reycraft, Petoskey, and Dr. Conklin, Boyne Falls were assigned to furnish papers for our next meeting.

All in all this was one of our best meetings.

G. W. NIHART, Secretary.

### ALPENA COUNTY

The regular monthly meeting of the Alpena County Medical Society was held at the New Alpena House, Thursday, March 15, at 6 p. m. The

following members being present: Drs. Dunlop, Bell, Cameron, Secrist, L. Secrist, Small, McDaniels, McKnight, Bertram, Purdy, Williams.

Drs. Cameron and McDaniels being the hosts.

The report of the Committee on Medical Fees was received and discussed, action being postponed for another month.

Dr. Bell addressed the Society in behalf of a strict adherence to the code of Ethics of the American Medical Society. His remarks were so well received that the Secretary was instructed to order a copy of the ethics, and give to each member for study. Dr. Bell was appointed lecturer on ethics, and asked to discuss the first subject at the next meeting.

The scientific paper of the evening was given by Dr. J. D. Dunlop of Alpena. His subject Physical Diagnosis. The paper dealt with the value of careful physical examinations, especially those of value in disclosing disease of the chest.

Both the papers of Drs. Bell and Dunlop were thought by the Society to be of value to the Profession as a whole, and the secretary was requested to forward them to the *State Medical Journal* for publication.

C. M. WILLIAMS, Secreary.

The following officers were elected for the Alpena Medical Society for the year 1917.

President—J. W. Purdy, Long Rapids.

Vice-President—Leo Secrist, Alpena.

Secretary-Treas—C. M. Williams, Alpena.

Delegate Med. Meeting—D. A. Cameron, Alpena.

Alternate—C. M. Williams, Alpena.

Medico-Legal—E. E. McKnight, Alpena.

C. M. WILLIAMS, Secretary.

### CHIPPEWA COUNTY

A regular meeting of the Chippewa County Medical Society was held at the Park Hotel, this city, on Tuesday evening, March 6. President J. J. Lyon in the chair. Minutes of the meeting held Feb. 6, were read and approved.

Under "Clinical Cases" report was made of a case of poisoning by taking 22½ grains of bichloride of mercury, in which anuria was complete, and emesis and bloody stools had been almost continuous a few hours following the ingestion of the poison. Patient in hospital under treatment, eight days, death impending.

Dr. E. H. Webster read a paper on "Interstitial Pneumonia" which was greatly enjoyed and fully discussed by the members.

### EATON COUNTY

Members and guests of the Society were entertained by Doctor and Mrs. W. E. Newark at the Charlotte Sanatorium for dinner at 12 o'clock. Following this most excellent meal the scientific program was held at the Arcade Theater.



1. "Experiences with Interposition Operation for Extreme Prolapse."

Dr. Reuben Peterson, Ann Arbor.

2. "Treatment of Fractures."

Dr. C. D. Brooks, Detroit.

Both talks were accompanied by lantern slides.

Interesting discussions followed each talk.

A report was made of the work accomplished by the committee appointed at meeting held March 6, regarding campaigning and assisting in securing favorable action on the proposition of bonding the county for the sum of \$25,000 to help make up the \$60,000 required to assure the building of a new hospital.

Miss Parker, tuberculosis nurse, appeared before the members and requested that they take under consideration the matter of giving, gratuitously, their services in the inspection of school children.

Dr. J. J. Griffin, city health officer, talked on the urgent need of school inspection, and bespoke the co-operation of all members of the Society in helping out the tuberculosis nurse and in securing the great benefit to the community, of her work amongst us.

ROLLIN C. WINSLOW, Secretary.

### MANISTEE COUNTY

At the regular meeting of the Manistee County Medical Society held January 30, 1917, the following officers were elected:

President—Dr. E. S. Ellis, Manistee.

Vice-President—Dr. Norconk, Bear Lake.

Secretary—Dr. Homer A. Ramsdell, Manistee.

Treasurer—Dr. H. D. Robinson, Manistee.

Delegate—Dr. H. D. Robinson, Manistee.

Alternate—Dr. L. S. Ramsdell, Manistee.

Following the election of officers the paper of the evening was read by Dr. P. C. Jensen on the subject of Prophylaxis, which was discussed by the members present. It was voted because of the excellence of the paper to have it published in the Manistee News-Advocate.

HOMER A. RAMSDELL, Secretary.

### MARQUETTE-ALGER COUNTY

At the annual meeting of the Society held at Negaunee on December 16, the following officers were elected.

President—R. A. Burke, Diorite.

Vice-President—Isaiah Dicotte, Michigamme.

Secretary-Treas.—H. J. Hornbogen, Marquette.

Delegate—V. H. Vandeventer, Ishpeming.

Alternate—A. W. Hornbogen, Marquette.

A regular meeting was held on January 30th at Marquette. The program consisted of a symposium of lobar pneumonia.

Symptomatology, Clinical Course—F. A. Felch.

Bacteriology—R. C. Mane.

Pathology—L. W. Howe.

Treatment—H. S. Smith.

Pneumonia is more prevalent in this county at present than it has been for years. Up to January 30th 64 cases were reported in Marquette city with 13 deaths.

H. J. HORNBOGEN, Secretary.

A meeting of the Society was held in Marquette on February 28, 1917.

The attendance at this meeting was large and the paper (Focal Infections) presented by Dr. Paul Van Riper of Champion was well received and elicited much discussion.

Applications for membership were presented by Drs. Harold Markham and Lowell Youngquist of Marquette.

The committee on program have provided for meetings to be held during the summer months at Munising, Gwinn, Michigamme. These meetings will partake of the nature of outings to which the women will be invited.

H. J. HORNBOGEN, Secretary.

### MUSKEGON-OCEANA COUNTY

On Feb. 16 the Society met at Hackley hospital and Dr. P. M. Hickey of Detroit was present and gave us an illustrated talk on Roentgenology. Dr. F. W. Garber was elected president for the current year at the last meeting of last year.

C. J. BLOOM, Secretary.

### NEWAYGO COUNTY

The annual meeting of the Newaygo County Medical Society was held and the following officers were elected for 1917.

President—Dr. Willis Geerlings, Reeman, Mich.

Vice-Pres.—Dr. Wm. Barnum, Fremont, Mich.

Sec'y-Treas.—Dr. Chas. B. Long, Fremont, Mich.

George G. Burns, A.M., M.D., was born in Muskegon, Michigan, March 8, 1876, and passed on February 23, 1917, at Blodgett Memorial Hospital at Grand Rapids, Michigan, not regaining consciousness after having undergone a minor operation.

Dr. Burns possessed a personality that endeared him to his friends. When one had arrived within the inner circle of his friendship you somehow felt that that friendship was different, you felt that it was something valuable, something to be retained.

While Dr. Burns had confidence in himself yet he was modest and unassuming. His professional position in Fremont on account of his surgical successes was a flattering one to a man susceptible of adulation, but Dr. Burns could not be flattered, bought or scared.

The loss to the profession of this brilliant high souled physician is commensurate only to the loss to the community of Dr. Burns as a citizen.

Voicing the opinion of the Newaygo County Medical Association I can most truly say that "he was a man take him for all in all, I shall not look upon his like again."

CHAS. B. LONG, Secretary.

## ST. CLAIR COUNTY

The St. Clair County Medical Society held its regular bi-monthly medical meeting at the Harrington Hotel, Thursday evening, February 22. Dr. C. W. Kuhn of Detroit being the guest for the evening.

After dinner the meeting was called to order by the President, Dr. Chester. An application for membership was received from Dr. Bowden, a recent practitioner of Sioux City, Iowa. Committee appointed to act on application: Drs. Cooper, McKenzie and Heavenrich.

Dr. Kuhn was introduced to the Society and presented a very interesting paper on "Intestinal Obstruction" which was appreciated by all. Discussion was opened by Dr. Heavenrich, followed by other members of the Society.

A vote of thanks was extended to Dr. Kuhn.

Thirty-seven members of the Society were present.

W. W. RYERSON, Secretary.

The St. Clair County Medical Society held their regular meeting at the Harrington Hotel, Thursday evening, March 8.

After dinner, the President, Dr. Chester, called the meeting to order.

Dr. S. K. Smith gave a short and instructive talk on acidosis which appreciated by all.

Dr. J. Moffett read a very interesting paper on Tonsillar Infections, with lantern slide demonstrations, which was very instructive.

The fee bill was discussed to a great extent. The rates being increased. Day calls in city, \$2.00; night, \$3.00; confinement cases, \$25.00.

A large attendance was present.

W. W. RYERSON, Secretary.

## Book Reviews

See Editorial Comments

THE SURGICAL CLINICS OF CHICAGO: Vol. I. No. 1, February, 1917—83 illustrations. W. B. Saunders Company, Philadelphia. Price \$10.00 per year. Published bi-monthly.

The reviews is confronted with the first issue of this new surgical series. One recognizes the similarity of arrangement to that of Murphy's Clinics. However, there is not imparted the same emphasis to the basic points of the subject discussed as Dr. Murphy was want to convey. Neither are the diagnostic points made to stand out with equal clearness and the operative technic description lacks continuity. Notwithstanding these criticisms there is much of interest and instruction to be found. The cases reported and discussed are from the clinics of Bevan, Oschner, Andrews, Beck, Eisendrath, Kanel, Lewis, McArthur, Phemister, Plummer, Ryerson, Speed.

The possibility presents and no doubt the opportunity will be seized to make a series of valuable one. We urge hearty support to the series.

A MANUAL OF NERVOUS DISEASES, by Irving J. Spear, M.D., Professor of Neurology at the University of Maryland, Baltimore. 12mo. of 660 pages with 169 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$2.75 net.

The purpose of this volume is to enable the general practitioner to acquire the necessary facts for a proper understanding of the anatomy and physiology, and the diseases of the nervous system. In as much as a thorough understanding of the anatomy and physiology of the subject is of such primal importance the author has admirably smoothed the way in his lucid presentation and so enables one to understand and interpret the abnormal variance. If one will but acquire unto himself these basic facts the difficulty of many cases of mental and nervous disease will be surmounted.

We cordially recommend this volume to our readers believing it to be a most helpful text.

A TREATISE ON DISEASES OF THE SKIN. For use of advanced Students and Practitioners. By Henry Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Eighth edition, thoroughly revised. Octavo of 1309 pages, with 356 text-illustrations, and 33 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$6.50 net; Half Morocco, \$8.00 net.

This standard work, revised to date, shows many changes and considerable new matter. The occupational diseases of the skin is indeed a welcome addition. This text has always been well illustrated and its value is now still more enhanced by the insertion of some thirty-five new cuts.

The practitioner and specialist may turn to this volume with the assurance that he will secure dependable information and assistance. If one is seeking for the most useful volume on the subject, we would by all means recommend Stelwagon's Treatise.

CLINICAL TUBERCULOSIS. By Francis M. Pottenger, A.M., M.D., L.L.D., Medical Director Pottenger Sanitarium, Monrovia, Calif. With a Chapter on Laboratory Methods by Joseph E. Pottenger, A.B., M.D. Cloth. Two volumes. Illustrated. C. V. Mosby Co., St. Louis.

These two volumes are a record of the author's extended observation during twenty years of clinical study and is the viewpoint of a clinician. The subject is not discussed from the narrow view that tuberculosis is caused by a bacillus producing pulmonary tubercles requiring fresh air and sunlight for treatment. It is a discussion of the disease as an infectious disease producing changes in organ or organs and directly influencing every body cell.

The work is in reality a series of monographs dealing with practically every phase of the subject, anatomy, laboratory, complication, etc., etc. Throughout there is always the practical application. One reads of symptoms and the treatise is such that the picture of the actual pathology is carried in the mental picture.

All in all it is a broad, modern presentation of the entire subject. It will be accorded a hearty reception.

CLINICAL AND LABORATORY TECHNIC, H. L. McNeill, A.B., M.D., Galveston, Texas, 88 pages, illustrated. C. B. Mosby Co.

This is a handy manual and contains a formula



for all laboratory tests that are of practical value in making diagnosis. It is just the reference one should have in his laboratory.

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PRACTICAL URINALYSIS, B. G. R. Williams, M.D. Cloth, 136 pages, illustrated. C. V. Mosby Co.

This little volume will enable the practitioner to find and interpret the meaning of those other minor practices of excretion that have an important bearing upon diagnosis of diseased conditions. It is an excellent manual and should save the purchaser many times its original cost.

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NEW METHODS OF BLOOD AND URINE CHEMISTRY. R. B. H. Gradywohl, M.D., Director Pasteur Institute, St. Louis and A. J. Blairas. 235 pages, 65 illustrations. Cloth. C. V. Mosby Co., St. Louis.

This work has been undertaken in response to a request from the author's personal friends, who have been interested in this line of investigation. There is no claim made for originality but the work combines a collection of information that has been widely scattered through the literature for the past three or four years. Investigations in blood chemistry have been proceeding so rapidly within recent years that this welcome summary on the subject is of additional value. Various tests of blood are imparted by giving the author's technic and procedure in his own laboratory. The volume should meet with universal approval and be of valuable assistance to every laboratory worker as well as to the profession of Michigan.

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AMERICAN PUBLIC HEALTH PROTECTION by Henry B. Menenway, A.M., M.D. Cloth. 238 pages. Price \$1.25. Bobbs Merrill Company, Indianapolis.

The author endeavored to arouse the public to realize the importance of efficient public health administration. It appeals to women of the country to become active in public health work and imparts information as to the activity and progress that is being made by public health authorities throughout this state.

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PRACTICAL MEDICAL SERIES. The Year Book Publishers. 327 So. LaSalle St., Chicago. Series of 1916, Vol. 7-8-9-10. Price of series of 10 Volumes \$10.00. These four volumes on Obstetrics are by D. Lee, Therapeutics by B. Evans, Skin and Venereal Diseases by Ormsby Mitchell, Nervous and Mental Diseases by Patrick Boscoe, which maintain the high standard of this publication series and presents therein the review of the latest information upon the subjects treated as has appeared in the literature of the year.

Every practitioner who wishes to remain abreast of the times should become a subscriber to this series and use it as a guide for his enlarged reading upon the progress of medicine, surgery and its allied specialty. It is one of the most satisfactory series that is presented to the profession.

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PRACTICAL BACTERIOLOGY, BLOOD WORK AND ANNUAL PARASITOLOGY. Including Bacteriological Keys, Zoological Tables and Explanatory Clinical Notes, by E. R. Stitt, A.B., Ph.G., M.D., Medical Director, U. S. Navy, etc. Fourth edition. Cloth, illustrated. 493 pages. P. Blakiston's Son & Co., Philadelphia.

Thoroughly revised and up to date notes of a course along the laboratory side of internal medicine. It is excellently gotten up and a most com-

plete practical presentation. It is just the volume that should be on the desk of every sincere practitioner and once used it will be turned to daily for helpful assistance.

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A MANUAL OF THERAPEUTIC EXERCISE AND MASSAGE. Designed for the use of physicians, students and masseurs. By C. Herman Bucholz, M.D., Orthopedic Surgeon Mass. General Hospital. Cloth, illustrated, 427 pp. Lea & Febiger, Philadelphia.

When one realizes the importance and necessity of intelligently instituted exercises and massage to correct deformities and physical defects he will appreciate the practical value of this volume. This therapeutic measure is often neglected and the profession needs to familiarize itself with the subject. This manual will blaze the way. It is clear in its presentation. Farther, it understandingly imparts the necessary exercises so that the instructor may be readily transmitted to the patient. The work wins our approval and merits a broad reception.

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CARE OF PATIENTS undergoing Gynecologic and Abdominal Procedures, before, during and after operation by E. E. Montgomery, M.D., Professor of Gynecology in Jefferson Medical College, Philadelphia. 12mo of 149 pages with 61 illustrations. Philadelphia and London: W. B. Saunders Company. 1916. Cloth, \$1.25 net.

A satisfactory manual for training and reference for a training school library.

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BLOOD-PRESSURE, From the Clinical Standpoint, by Francis Ashley Faught, M.D. Formerly Director of the Laboratory of Clinical Medicine at the Medico-Chiurgical College, Philadelphia. Second edition, thoroughly revised. Octavo of 478 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Price \$3.25 net.

This work truly contains the pith of medical literature bearing on blood pressure studies in their relation to medicine, not only in cardio-vascular and renal conditions, but also in many diseases in which clinical observation has shown the information obtained by the sphygmomanometer to be of value. As such then it must of necessity be in the possession of every physician in order that he may be fully familiar with the subject.

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PHARMACOLOGY AND THERAPEUTICS For Students and Practitioners. Horatio C. Wood, Jr., M.D., Professor of Pharmacology and Therapeutics, University of Pennsylvania. 2nd Edition. Cloth, 455 pages. Price \$4.00. J. B. Lippincott Company, Philadelphia.

A most satisfactory text containing the latest information.

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HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE. By Henry S. Munro, M.D., Omaha, Neb. Fourth Edition, revised and enlarged. Cloth, 481 pages. C. V. Mosby Company, St. Louis.

This is a practical manual designed especially for the practitioner of medicine, surgery and dentistry. It is practical and applicable and deserves more and more the physician's attention. It is not a subject that should be relegated solely to the alienist. The doctor should become more familiar with its principles and to do so this handbook provides an excellent means.

## Miscellany

### PROPAGANDA FOR REFORM.

*Glycerophosphat Comp. Ampuls, 1 Cc., Squibb.*—The Council on Pharmacy and Chemistry refused recognition to Glycerophosphate Comp. Ampuls, 1 Cc. Squibb, each said to contain sodium glycerophosphate 0.1 gm., strychnin cacodylate 0.0005 gm., and iron cacodylate 0.01 gm., because the name did not indicate the potent ingredients and because the administration of a mixture of sodium glycerophosphate, strychnin cacodylate and iron cacodylate is irrational. In recognition of the Council's conclusion, Squibb and Sons state that the sale of the ampules has been discontinued. This cooperation in the work of the Council on Pharmacy and Chemistry is gratifying (*Jour. A.M.A.*, Feb. 3, 1917, p. 388).

*Emetine in Dysentery and Pyorrhea.*—Emetine is accepted today as an almost ideal specific against amebic dysentery. Experience indicates that by its use abscess of the liver can be prevented and even cured. When a differential diagnosis between amebic and bacillary dysentery cannot be made, emetine may be of diagnostic value because improvement follows from its use if the case is amebic. In neglected cases and some other forms of the disease the emetine treatment may fail of complete success. As a direct cure for pyorrhea emetine seems to have failed, not because it does not act on the ameba which are found in the pyorrheal pockets but because pyorrhea is not caused by ameba (*Jour. A.M.A.*, Feb. 3, 1917, p. 374).

*Sargol.*—In case of the United States against Wylie B. Jones and H. E. Woodward, proprietors of "Sargol" came to an end, January 30, 1917, after a trial lasting thirteen weeks. Jones was fined \$20,000 and Woodward was fined \$10,000. Sargol was a nostrum of the get-fat-quick variety; as an alleged "flesh builder" it was advertised extensively and intensively by its exploiters (*Jour. A.M.A.*, Feb. 3, 1917, p. 381; Feb. 10, 1917, p. 468; Feb. 24, 1917, p. 642).

*More Misbranded Nostrums.*—The following "patent medicines" were found misbranded under the U. S. Food and Drugs Act chiefly because false and fraudulent therapeutic claims were made for them: Collins' Ague Remedy, admittedly containing 33⅓ per cent. alcohol. Swaim's Panacea containing nearly 5 per cent. alcohol, 58.5 per cent. sugar, 0.1 per cent. salicylic acid and some sarsaparilla. Swayne's Panacea, essentially the same as Swaim's Panacea in composition. Croxone, capsules containing a white pill and a red oil: the oil was oil of pine or oil of juniper dissolved in a fatty oil, while the pill consisted essentially of strychnine, a trace of brucine, aloin, hexamethylenamin, lithium carbonate, potassium nitrate and probably a trace of atropin. Freeman's Balsam of Fir Wafers, lozenges consisting of sugar with very small amounts of oil of turpentine and eucalyptus with the possible presence of balsam of fir. Renne's

Pain Killing Oil, essentially a water-alcohol solution of sassafras oil and cayenne pepper containing 78.6 per cent. alcohol and 4 per cent. volatile oils and possibly a little mustard oil and soap. Schuh's Yellow Injection, an aqueous solution of boric acid, carbolic acid and berberin. Schuh's White Mixture, a mixture of mucilage of tragacanth, balsam of copaiba, and probably sandalwood oil, flavored with cassia. Elmore's Rheumatine Goutaline, apparently a dilute tincture of colchicum. Armstrong's Croup Ointment, containing eucalyptus and traces of other oils, possibly cassia and thyme. Anticephalalgine, containing 30 per cent. alcohol and 4 grains acetanilid to the ounce, sodium bromid, sodium salicylate, caffein and antipyrin. Wright's Rheumatic Remedy, an emulsion composed principally of turpentine, methyl salicylate, sugar, acacia, and water, with probably some resinous or plant extractive matter. H. G. C., a watery solution of borax and berberin sulphate. Russell's White Drops, containing 13 to 16 per cent. of alcohol as well as codein. Pneumovita, a sweetened gum, containing small amounts of charcoal and iron phosphate having a wintergreen flavor. Mecca Compound, an ointment containing carbolic acid, camphor, borates, zinc compound, sodium soap in a soft paraffin base. Best Cough Remedy, a spearmint syrup containing alcohol, chloroform and morphin. Stella-Vitae, a female weakness remedy. Vegetable Pulmonary Balsam, a syrup flavored with spearmint, sassafras, containing alcohol and opium (*Jour. A.M.A.*, Feb. 17, 1917, p. 565 to 566; Feb. 24, 1917, p. 651).

*Firwein.*—The Council on Pharmacy and Chemistry, reports that Firwein (The Tilden Co.) is sold under the claim that when swallowed it has a "predilection" both for the bronchial mucosa and also for the genito-urinary organs. The Council finds that little information is given in regard to the composition of Firwein. As the composition of Firwein is secret, the therapeutic claims unwarranted and its use irrational, the Council declared it inadmissible to New and Nonofficial Remedies (*Jour. A.M.A.*, Feb. 17, 1917, p. 564).

*Biniiodol.*—The Council on Pharmacy and Chemistry reports that Biniiodol is claimed by the manufacturer, Charles C. Yarbrough, Memphis, Tenn., to be a solution of 1 per cent. mercuric iodid and 2.75 per cent. guaiacol in a vegetable oil and that it is marketed with the implication that it is new and superior to other oil solutions of mercuric iodid. The Council found that the claims of novelty and of superiority were not substantiated by the evidence. Clinical investigation did not demonstrate the effects of Biniiodol to be different from those of solutions prepared in the A.M.A. Chemical Laboratory, with and without guaiacol. The Council declared Biniiodol, inadmissible to New and Nonofficial Remedies because claims of superior efficiency were not established; and because it is an unessential modification of an established non-proprietary article marketed under a proprietary name (*Jour. A.M.A.*, Feb. 24, 1917, p. 650).



# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVI

GRAND RAPIDS, MICHIGAN, MAY, 1917

No. 5

### Doctors of Michigan Your Country Is Calling You

This is no time for ceremony. The responsibility upon us is one of awful moment to this country. We are apt to shut our eyes and indulge in the illusions of hope. We are apt to shut our eyes against a painful truth, and listen to the song of the Siren, till she transforms us into beasts. We are apt to shift responsibilities.

We must not, in this hour, permit delusion to deflect our course of action—MICHIGAN MUST RESPOND WITH SIX HUNDRED DOCTORS NOW.

May future years and posterity be able to point with pride to the manner and promptness of our response.

Doctor, Your Country, Your Flag, Michigan, Your profession calls upon you to do your duty. WILL YOU GO?

*Thou, though the world should misdoubt thee,  
Be strong as the seas at thy side;  
Bind on thine armour about thee  
That girds thee with power and pride.  
Where Washington stood, where Lincoln stood,  
Where fame sees McKinley stand,  
Stand thou too, and now too  
Take thou thy fate in thy hand.*

## *Original Articles*

### SOCIAL INSURANCE.\*

FRANK B. WALKER, M.D.

DETROIT, MICH.

Social insurance is a comparatively new project in our own country but it is a problem that presses hard for solution.

It is of German origin, having grown out of their Socialist movement. It is a matter of history that Social Democracy had made serious inroads upon the conservatives and the government so that in 1878 Moltke prophesied that Socialism, even more than France, would be Germany's enemy in the future. In 1871, 100,000 Socialist votes only were recorded and they were represented in the first German Parliament by two members. In 1893 there were 1,786,738 votes and 42 members in Parliament. Had they been proportionately represented they would have had one-fourth of the whole number (397) of seats in the Reichstag.

For several years Bismarck had attempted various repressive measures against the spread of Socialism and the imminence of a revolution and found the cure worse than the disease. He therefore countered and inaugurated what has been called the "Economic Era" of his career. His first act was the transition from free trade to protectionism. Other schemes included insuring the working classes against old age, illness, accidents and indigence, which he succeeded in getting into practical form even before the death of the Old Emperor in 1888. The German sickness insurance system was put into effect as early as 1883. German efficiency has been coincident with these economic schemes.

Social insurance is a comprehensive term. Insurance has been defined as "a provision made by a group of persons, each singly in danger of some loss, the incidence of which cannot be foreseen, that when such loss shall occur to any of them, it shall be distributed over the whole group." Social insurance is therefore intended to protect the individual members of the social organism against some of the menaces to which they are exposed.

Social insurance embraces:

1. Industrial accident insurance.
2. Health insurance, including sickness and disability insurance not otherwise considered.
3. Unemployment insurance.

4. Invalidity and old-age insurance.
5. Provision for widows and orphans.

Although voluntary insurance against sickness, accidents and other emergencies has developed spontaneously here as abroad, social insurance as such exists in the United States in only two forms, namely workmen's compensation acts and widows' pension laws.

On May 30, 1908, the first American compensation act was passed by Congress but was limited to a few employees of the Federal Government. In 1910, the State of New York passed the first general compensation act but it was declared unconstitutional. The first state act to remain valid became effective in New Jersey, July 4, 1911. Now there are compensation acts in force in thirty-three of our states and territories and others are preparing for such legislation.

The Compensation Law of the State of Michigan was approved March 20, 1912 and became effective September 1st of that year. It is prefaced as "An act to promote the welfare of the people of this state, relating to the liability of employers for injuries or death sustained by their employes, providing compensation for the accidental injury to or death of employes and methods for the payment of the same, establishing an industrial accident board, defining its powers, providing for a review of its awards, making an appropriation to carry out the provisions of this act, and restricting the right to compensation or damages in such cases as are provided by this act."

Employers may operate under this act, in which case liability defences, such as negligence of employee or fellow employee are removed, or they may, with the approval of the accident board, elect to pay compensation for injuries and be not subject to the provisions of this act in the removal of defences. This act does not apply to actions to recover damages for personal injuries sustained by household domestic servants and farm laborers.

The term employee is used to include any one in the service of another in the usual course of the trade, business, profession or occupation of his employer and applies also to those in the service of the state, county, city, township, incorporated village, or school district, under any appointment or contract of hire, express or implied, oral or written.

The benefits are medical, and hospital services and medicines for three weeks, compensation for wages lost beginning with the third week, except when incapacity extends to eight

\*Read before the Genesee County Medical Society, February 28, 1917.



weeks or beyond, in which cases it dates from the time of injury, payments to dependents in case of death, funeral expenses in case there be no dependents, and compensation for total or partial incapacity, the amount depending upon the usual wage and loss sustained.

An Industrial Accident Board of three members, appointed by the governor, administers the act, but either party may apply to the circuit court for the county in which the accident occurred for a review, the result to have the same effect as any other judgment of that court.

Widows' pension laws are regarded as the least conservative form of Social insurance since they are based upon a pension instead of a contributory insurance principle, and yet they have already been enacted in several states.

Michigan passed such an act, May 7, 1913. It provides that "if the mother of a neglected child or children is unmarried, or is a widow or has been deserted by her husband or is married, has been divorced and is poor and unable to properly care for said child the court may fix an amount of money necessary to enable the mother to properly care for the child or children, the amount not to exceed \$3.00 per week for each child."

The act also provides for the medical care of such dependent children in a public institution or hospital if they are ill and the mother is unable to properly care for them through financial difficulty.

It is the desire and intent of the State to give worthy poor children a decent living, and a parental home is deemed superior to an orphanage or other public institution.

With the exception of taxation for the maintenance of Marine Hospital service there is no municipal, State or Federal provision for health insurance.

On July 16, 1798, Congress authorized the taxing of all vessels of the United States Merchant Marine 20 cents per month for every person employed on board, that sum to be deducted from their wages. In 1870 the assessment was ordered doubled. In 1884 a tonnage duty was substituted for the capitation tax. At the present time the beneficiaries of that service include every person connected with the U. S. merchant marine and the aids of navigation. Incidentally the Federal government is committed to health insurance by the taxation of industry.

Although health insurance receives no other governmental support than the aforementioned

there are numerous private systems, classified in the following four groups:

1. Trade unions—national and local.
2. Employers' organizations for the benefit of employees—railroad and establishment funds.
3. Mutual societies—fraternal orders, local lodges, general benefit societies and special sick benefit funds.
4. Commercial companies operating for profit or on the mutual principle—industrial insurance companies and casualty companies doing industrial health insurance.

Rubinow, a close student of social insurance, has estimated that 1,130,000 workmen were covered by those health insurance agencies in the year 1907.

Social insurance has been a part of the constructive program of the Socialist Party. It might have made headway faster in America as in Europe had not labor enjoyed higher wages here than there. However, with conditions as they have been, the hazards and misfortunes of industry have been experienced severely enough by many and recognized fully enough by more to result in some legislation.

Industrial liability laws have been on the statute books for a long time but the burden of proof rested on the laborer; there would almost inevitably be a prolonged and wearisome trial with probable appeal and protracted delays, and, even in the event of a verdict for the plaintiff, the lawyers' fees and other court costs would leave but a small recompense for the poor victim, who should have had all the court allowed. Then too there were not infrequent miscarriages of justice. The whole thing was all too unsatisfactory if not intolerable.

Now on the principle that the industry or the employer who receives the profits, should bear or share the cost of injuries, compensation laws make it incumbent only to give due notice of the injury and its relation to his employment.

Compensation laws differ in form, scope, benefits and methods of administration. They have been established throughout Europe and in thirty-three of our states and territories. There remains now to be effected a unification or uniformity of them so that their best features may be incorporated in all. There is a tendency to shorten the waiting period and the adoption of such measures as will prevent or curtail litigation.

Now that the body politic is committed to

compulsory accident insurance it seems natural and certain that only public opinion is needed to secure other related forms of social insurance. Already there are precedents of compulsory sickness insurance in about half of the countries of Europe; voluntary subsidized sickness insurance in at least five other European countries; compulsory old-age insurance in two European countries; old-age pensions and voluntary subsidized state systems of old-age insurance in Great Britain, France, Germany and seven other European countries; unemployment insurance in three European countries and rapidly spreading, and widows' and orphans' pensions are being introduced.

Definite movements have been begun also in this country. For instance the First American Conference on Social Insurance was held in Chicago in June, 1913. Only the Great War prevented an International Congress on Social Insurance in Washington. Congressman Berger introduced a National Old-age Pension bill in the winter of 1914. A Social Insurance Commission was created in California in 1915. Health insurance, old-age pensions and insurance and unemployment insurance are common and frequent topics discussed in State and National Conferences.

At the meeting of the American Medical Association held in Detroit last June, on the recommendation of the Reference Committee on Legislation and Political Action, the House of Delegates requested each constituent state association to establish a committee on social insurance to work in conjunction with the committee on Social insurance of the American Medical Association. This action of the House of Delegates was taken because the House considered that social insurance will probably soon become an important factor in the social and economic status of the practitioner of medicine.

Arguments for health and unemployment insurance are not unlike those for accident insurance.

It has been estimated that from two-thirds to three-fourths of all productive workers in the United States depend upon wages or small salaries for their existence. It is coming to be better realized that the health of the wage working population depends largely upon economic conditions and that measures tending to relieve or prevent disease are needed. The "Human scrap heap of industry" is a thing that must be conserved if industrial efficiency is to be maintained for the state and nation as well as for the individual.

Students and writers on this topic have mentioned the following factors as affecting the health of the wage working population:

1. Occupational disease hazards.
2. Irregularity of employment.
3. Unhealthful conditions of living.
4. The employment of women and especially married women, in industry under modern conditions of work.
5. The economic disadvantage at which a large proportion of wage workers and their families are placed as the result of low wages and insufficient annual income.

Among disease hazards of occupation are harmful substances, such as fumes, vapors, gases, dusts and metals, and harmful conditions, such as heat, moisture, cold, confined air, overcrowding, compressed air, excessive light, strains of muscles, nerves, or special senses, long hours of work, the piece work system and the increasing use of machine methods. Statistics show unmistakable evidences of morbidity and mortality in certain occupations. For instance clerks and salesmen in shops are sick four days per annum; painters and decorators 10.17 days; while cardboard and paper box factory workers show an average annual illness of 15.74 days.

A study of the U. S. census of 1909 shows a death rate of 6.6 per cent. in farmers, planters and overseers of all ages from tuberculosis, in iron and steel workers 16.3 per cent., in tobacco and cigar factory operatives 24.3 per cent., and in printers, lithographers and pressmen 29.2 per cent.

Irregularity of employment is significant in this connection because it tends to deteriorate the health and well being of the individual. The strain of work at top speed in busy seasons develops neurasthenic conditions. The slack season means a smaller income and difficulty in keeping up a standard of living. The unemployed is driven to seek a poorer job and he is soon on the toboggan.

It is impossible to more than mention as unhealthful conditions of living, inadequate diet, due to the average small yearly income of the majority of the working population and the increasing high price of food, to unfavorable housing conditions, to congestion in industrial centers, to the effects of overcrowding and lodging house conditions as evidenced by the prevalence of disease, and to the general community environment.

It is significant to compare the average mortality of 27 per cent. in children under 5 years



in the Federal reports, 1909 to 1913 inclusive, as compared with a mortality of 40 per cent. at Johnstown, Pa., of 48 per cent. at Gary, Ind., and 67 per cent. at Monessen, Pa., where unhealthful conditions are known to exist and low wages prevail. Several other reports might be added corroborating this observation. They are pertinent because mortality among children is generally recognized as a very sensitive indicator of the health conditions of a community.

According to the census of 1910 there were about 8,000,000 women engaged in industry. Of that number about 3,000,000 were occupied in stores, mills and factories. In Leipzig during 19 years, 1887-1905, male wage earners lost on an average of 8.55 days each per annum while female wage earners lost 10.30 days each. In 1914, 4,000 female Government employees lost 8.90 days each on account of sickness while 12,000 male Government employees lost on an average only 4.82 days.

It is generally accepted that in the population as a whole the mortality rate in men is greater than in women. Statistics of the insurance funds in Leipzig, Austria and Italy show a higher mortality rate among women than in men under 40 years of age. Comparatively few women remain in industry after that age. It has been shown also that certain industries, as the cotton mills, have a deleterious effect on workers therein. The mortality rate among infants whose mothers are in industry is also much higher than among those whose mothers are not industrially engaged.

Several authorities have come to agree that for the average family of five members an annual income of \$800.00 is needed to maintain a healthful standard. According to Scott Nearing "half of the adult males working in the industrial sections of the U. S. receive less than \$600.00 per year, and three quarters are paid less than \$750.00 annually." I have seen other estimates that are still lower. When it is understood that in many manufacturing and mining industries there is lost on the average from one-fifth to one-third of the full working time during a year from all causes we must be ready to accept the estimates made of average incomes.

Poverty is therefore one of the greatest menaces of the health of the working classes and the partnership of poverty and disease is fixed.

It is impossible in this paper to go deeply into the subject of the responsibility for condi-

tions causing disease, but the directions of the responsibility may at least be hinted at.

There are three sets of conditions having causal relations to disease. They are:

1. Conditions for which the employer and the industry are responsible.
2. Conditions for which the public, through its regulatory and welfare agencies, is responsible.
3. Conditions for which the individual worker and his family are responsible.

In regard to the responsibility of the employer it should be noted that the kind of employment, whether more or less harmful, the conditions of work, the regularity of employment, the standard of wages, the hours of work, and the kind and character of houses owned by the employers, in which the employees live, all have bearings on the question. It is understood of course that for some of those conditions the employers are only partially responsible. That they feel responsible is already acknowledged by the physical examinations to which many corporations do now subject new applicants for employment.

That the public is partially responsible for disease conditions is evidenced by health commissions, sanitary regulations applying to water supply, sewage, plumbing, garbage, purity of foods, sale of drugs, street cleaning and many other matters.

The individual does share a great responsibility in the conditions predisposing to disease. Personal conduct and the standard of living which he and his family maintain are important and yet it must be remembered that they have to do with personal liberty.

In all three sets of conditions affecting the causation of disease there are overlappings of responsibility. It must be admitted that all three parties share in the cause and should share in the cost. Health insurance like accident insurance is worth while, else neither would be voluntarily sought or bought. Undoubtedly many or the majority of wage earners also would secure them if they could but we know they cannot afford them. Insurance costs money. It is necessary to get together on a money basis for as one writer puts it, "dollars and cents is the universal language; every one understands it." Let us talk in that language.

Under the German sickness insurance system all workmen, helpers, journeymen, apprentices, persons engaged in home working industries, and servants are compelled without regard to income to be insured; also all other

persons employed and earning 2,500 marks (\$595) a year or less. Any person may voluntarily be insured whose income is 4,000 marks (\$952) a year or less.

Insured persons contribute two-thirds; employers contribute one-third. The cost of supervision is borne by the Imperial and State Governments. There is an implied limit of 4½ per cent. of the basic wage. Employers are responsible for contributions of their employees.

Benefits are distinctly not public charities and include medical, cash, maternity and funeral benefits.

In the British system the following are members: All persons 16 years of age and over who are employed, whether in factory, on farm, in domestic service, or in any capacity whatever for which wages are paid, without regard to income. Also any person may become a voluntary member whose income is 160 pounds (\$778.64) a year or less, if not over 65 years of age.

Insured persons contribute four-ninths; employers contribute three-ninths; Parliament contributes two-ninths. In some cases the proportions are changed to suit conditions. The cost of administration is borne by the entire fund. In no case is the employer required to pay more than 12 cents per week per employee, nor can the employee be compelled to pay more than 8 cents per week. Contributions are collected by a system of stamps sold by the Government.

The right to benefits begin after twenty-six weekly payments have been made and include medical, cash and maternity benefits.

Sick-benefit funds have been established in the United States, typical ones being Railroad funds, Trade Union Funds and mutual funds.

The U. S. Commission on Industrial Relations have had suggested in the staff report that the Commission recommend a Federal System of sickness insurance in which the membership shall comprise all employees of persons, firms, companies and corporations engaged in interstate commerce, or whose products are transported in interstate commerce, or which may do business in two or more states, the employees of intrastate establishments to be permitted to be insured, if they so elect, under regulations to be prescribed by the commission.

The contributions should probably be in the proportion of 50 per cent. from workers, 40 per cent. from employers, and 10 per cent. from the Government, the last named being for purposes of administration.

Benefits would be available for a limited period in the form of cash and medical benefits during sickness, nonindustrial accidents, and childbearing; death benefits to be of limited size and payable on presentation of proper evidence.

The administration of the insurance funds would be carried out by a national sickness insurance commission to be appointed by the president and confirmed by the senate.

Correlation of the insurance system with the medical profession is absolutely necessary. Contracts with physicians should allow to each a per capita payment for the insured persons under his care, the right of selection of physician to be retained by the insured. For the signing of certificates entitling the insured to benefits and for treating the insured in hospitals the Surgeon General should detail physicians from the Public Health Service, their entire time to be given to these and other duties (consulting with local physicians enforcing Federal laws and regulations, and co-operating with local authorities.)

That plan would in all probability be most acceptable to the medical profession and to the general public because it would continue the established form of "private practice" and also secure freedom of choice of physician. The latter is considered important since it has to do with the proper confidence of patient in the selected healer—a prerequisite to successful treatment.

We in America are loth to believe in unemployment insurance. We scarcely believe there is an unemployment problem. We are wont to hear if not to say "Anyone who really wants a job can get one of some kind." "You can always get work on the farm." "So far as the women are concerned—any girl can get housework."

In spite of our illusions there are some unwelcome facts which we do not know.

To quote from Keller: "The 1900 Federal census shows that 22.3 per cent. of all persons having gainful occupations were not working, either at their particular occupation or at any other, at some time during the year. Over 2,600,000 men and nearly 500,000 women were out of work from four to six months, and over 500,000 men were out of work seven months or over." Says the report:

"It appears that approximately four persons out of five who claimed gainful occupations were continuously employed throughout the census year, while the fifth person was idle for a period varying from one to twelve months."



Again, "In 1901 the Federal Bureau of Labor made an investigation into the cost of living of 25,440 families of workmen or persons on salaries of not over \$1,200 a year, distributed over the U. S. The report shows that about half—49.81 per cent.—of the 24,402 heads of families were idle for part of the year."

It is surprising to learn that of the wage earners of N. Y. State, 983,686 or about one-third are women. As to house work, Horace Greeley's comment in 1846 is still pertinent: "When nine-tenths of the Yankee girls prefer to encounter the stunning din, the imperfect ventilation, monotonous labor, and excessive hours of a cotton factory in preference to doing housework, be sure the latter is not yet what it should be."

Observation and reflection inform us that every change or threatened change of the tariff disturbs industry and throws men out of work. This is an age of inventions, of new machines and new methods. While they all ultimately become blessings for all mankind they are a curse to those who lose their jobs thereby. Each one is in effect the spinning jenny over again. The head of a family ousted from his job is poorly consoled when told that in the long run mankind will benefit by the new machine. How would you men like to have your business or profession quickly lawed out of existence?

Some trades and businesses are seasonal. Witness the building trades, clothing, canning and lumber industries. There are slack seasons in all of them. Who is responsible for that, the employer or the public? Unemployment is an incident and not an accident of industry.

So also are invalidity and old age. They are to an extent the effect of occupation. In industry men become superannuated before they become old. In some occupations mere age is not a crime nor a great hardship, but in industry where vigor and physical exertion count for so much and profit is the sole standard of service, ethics and respect for old age count for naught. There is the same justice however in pensioning the veterans of industry as the veterans of war, for both classes have spent for their country.

For a conclusion the following paragraph from Mr. London's speech in the House of Representatives appeals to me:

"The worker should not be asked to assume all the burdens, all the risks, all the hazards of modern industry, with its accidents, occupational disease, life-sapping intensity, with its sudden rushes and its long slacks, with its

constant fears and anxieties. And in the end the worker will pay for it all. I know that the struggle for bread will continue to be bitter, and that the emancipation of the masses can become a reality only with the abolition of the competitive system of society in which the propertyless are at the mercy of the class which controls the land and the means of production. It is not so much the economic advantage, although that will not be slight, which will accrue to the masses, as the introduction of a principle of ethics into industry, of a moral law into a sphere of life where the law of force rules today. Human society should be something more than a mere aggregation of bipeds, each seeking to devour the other."

## HEMORRHAGE DURING THE FIRST HALF OF PREGNANCY.

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The most common and significant forms of hemorrhage that occur during the first semester of pregnancy are those arising from intra-uterine or miscarriage and extra-uterine pregnancy.

A pedunculated intra-uterine polyp may cause marked bleeding with uterine contractions and simulate an abortion. An absence of the symptoms and findings of pregnancy and of an amenorrhea should render the differential diagnosis easy.

Attention should be called to the local diseases of the vagina and cervix that may give bleeding during early pregnancy such as erosions, ulcerations, neoplasms and malignancy. The diagnosis in these instances is rapidly cleared upon vaginal examination.

The diagnosis and differential diagnosis between abortion and extra-uterine pregnancy is not at all times easy.

The diagnosis of abortion rests upon a diagnosis of uterine pregnancy. A careful inquiry should be made into the history for the subjective symptoms of pregnancy and a thorough bi-manual examination should be made for the findings of pregnancy.

The diagnosis of pregnancy being made, we then search for the symptoms of abortion. The most constant symptom is bleeding from the uterus.

Threatened abortion is indicated by a bloody discharge, slight drawing pains in the back and a pelvic uneasiness. The blood is generally

an ooze, although it may come with a gush. Its color is usually bright red but in some instances, appears as a brownish discharge. The pain is slight and more of a feeling of weight. An abortion may appear threatened for days or weeks and then upon the subsidence of symptoms, the pregnancy may go on to full term.

If the bleeding continues, becomes profuse and uterine contractions develop, a severe backache appears and the patient has a frequent desire to urinate, the abortion becomes inevitable.

If the product of conception is expelled completely, the uterine contractions cease and the hemorrhage which is usually moderate gradually stops.

In those cases where the fetus escapes, leaving the secundines behind, or where the uterus is not entirely rid of its contents, we have an incomplete abortion. A missed abortion is where the fetus dies and is wholly retained in the uterus.

When there is a gradual diminution of the flow and a cessation of pain, the abortion is usually complete but when the flow continues with occasional exacerbations, the uterus in all probability contains remnants of deciduae. Further evidence of the abortion being incomplete is found upon examination by ascertaining that the uterus is large, flabby, soft, and thicker antero-posteriorly than normal, also the supravaginal portion of the uterus is compressible, which is Hegar's sign.

Incomplete abortion is a dangerous condition because of bad sequelae. The retained deciduae and membranes break down and come away in a profuse lochia with much odor. In many instances, saprophytic bacteria invade the uterus and a sepsis results. This in turn may be properly treated, but frequently an endometritis persists. Then again, sepsis may intervene with its alarming complications.

Some of the placental tissue may be well nourished and a placental polyp develops. These polyps occasionally become the seat of an hydatidiform mole or of a malignant syncytioma.

It is not advisable to examine a patient with a threatened abortion because of the danger of causing more hemorrhage and exciting uterine contractions and should be done only when a diagnosis must be made and then, only with the greatest of care.

Rest in bed is the best treatment and morphine may be given to insure quiet of the patient and uterus. If the hemorrhage ceases, the patient may be allowed to sit up in bed within a few days and may gradually resume

her duties after from five to seven days. Upon the first appearance of bleeding, she should again go to bed. During the first days in bed, the bowels should not be disturbed and warning should be given in regard to straining.

Much difference of opinion exists as to the treatment of inevitable abortion. If nature is able to expel the product completely and the bleeding is not too great, she should be allowed to do so without interference. Curettage or tamponade for every case of imminent abortion is unnecessary and unwise.

Our choice of treatment depends entirely upon the amount of hemorrhage and upon the surroundings of our patient.

If the hemorrhage is continuous and profuse, measures must be taken for its control.

The majority of American obstetricians favor the tamponade of the cervix and vagina with strips of gauze. The tampon is allowed to remain in place about twenty-four hours. At the expiration of that time, the tampon is removed, the cervix is found softened and dilated and the ovum is often found on the tampon.

In cases where the ovum is not expelled, removal of the product should be carried out under anesthesia by means of the gloved finger or a large dull curette. In those cases where the cervix is not softened and dilated, a second packing may be done.

The objections to the tamponade are that it is not a certain method of evacuating the uterus, the tampon by capillary action may carry infection into the uterus and sepsis result. The tampon may also cause vesical irritation and catheterization may have to be resorted to.

The writer prefers the more rapid dilatation of the cervix by the fingers or by the Wiley dilator or by vaginal hysterotomy.

During the first months of pregnancy, the cervix may be dilated by the Wiley dilator and the finger. Great care must be exercised in the dilation to avoid rupturing the cervix and lower uterine segment. Dilation being effected, the fetus and its membranes may be removed piece meal by a placental or ovum forceps. To insure complete removal, the finger or a dull curette may be used to remove the tags of deciduae. Caution must be exercised in the use of the curette not to puncture the softened uterine wall.

When it becomes necessary to evacuate the uterus beyond the first months, vaginal hysterotomy offers an ideal method. It is a certain and a rapid procedure. Infection offers the only contra-indication.



## DIAGNOSIS OF EXTRA UTERINE PREGNANCY.

A fertilized ovum may become arrested and develop at any point of its passage from the ovary to the uterus. The most common place for this accident to occur is in the tube, the greatest number occurring in the median or isthmal portion of the tube, the next greatest number in the free or ampullar end, and the fewest in the uterine or interstitial portion.

If the graafian follicle becomes impregnated before leaving the ovary, an ovarian pregnancy results.

Several authentic instances of primary abdominal pregnancy on the folds of the broad ligament and on the omentum are on record. Ovarian and primary abdominal pregnancies are of such rare occurrence that they are only worthy of mention in passing. For practical purposes then, we have only to deal with ectopic pregnancy in the Fallopian tube.

The course of the pregnancy may end in one of the following four ways:

1. By rupture of the tube.
2. By tubal abortion.
3. By death of the embryo before rupture.
4. By development of the fetus to full term without rupture.

The most common termination is by tubal rupture. The over-distended tubal wall weakened by the penetrating chorionic villi breaks and the product of reproduction is thrown off through the opening either into the abdominal cavity, or between the layers of the broad ligament.

In tubal abortion the product of conception is either partially or completely extruded through the fimbriated extremity of the tube into the abdominal cavity. Abortion usually occurs not later than the eighth week of development and practically always in the ampullar variety.

It occasionally happens that the fetus dies, due to a hemorrhage into its membranes and the mass thus formed, which is called a tubal mole, may remain in the tube for a considerable length of time without causing many symptoms. In other cases, the mass becomes infected and a pyo-salpinx results.

Very rarely a tubal pregnancy goes on without rupture to full development and the fetus dies because the diagnosis is usually not made.

An analytical study of the histories of thirty cases of extra-uterine pregnancy entering the department of Dr. Reuben Peterson in the University Hospital at Ann Arbor prior to July,

1914 is made the basis for the following remarks on diagnosis.

The diagnosis of extra-uterine pregnancy may be discussed to advantage under the following three headings:

1. Diagnosis before rupture or abortion.
2. Diagnosis at the time of rupture or abortion.
3. Diagnosis of the development of the fetus during the last half of gestation before rupture occurs.

Unfortunately, a diagnosis of extra-uterine pregnancy is rarely made before rupture of the gravid tube occurs. The majority of patients believe themselves to be pregnant but there are usually no symptoms indicating any pelvic pathology and the necessity of a pelvic examination is not realized.

Our suspicions however, should be aroused when a history of cramp-like pains low in the side is given. Associated with the cramps, there may be a feeling of fullness, weight, or pressure in that location. Our suspicions should be strengthened, if in conjunction with the above symptoms an irregular bloody vaginal discharge or any form of bleeding appears.

In the vast majority of cases a diagnosis of threatened abortion is made and the possibility of extra-uterine pregnancy is lost sight of.

The following history of a University Hospital patient is recalled. A young lady, aged 25, came to the Clinic because of flowing. Her menstruation had always been regular and normal. Her last period commenced on time, but instead of ceasing on the fifth day, it continued and after several weeks of daily flowing, she consulted the Clinic. Associated with the flow, she spoke of experiencing some cramp-like pains in her right side, but she said they were not severe.

Examination of the pelvis revealed the uterus to be of normal size, movable and not tender. In the right broad ligament close to the uterus there was an oblong mass about the size of a small lemon which was tender upon bi-manual examination. A tentative diagnosis of extra-uterine pregnancy was made.

A laparotomy was promptly performed and an unruptured extra-uterine was found in the interstitial portion of the tube.

Diagnosis at time of rupture.

The symptoms of tubal rupture are usually ushered in without warning. Very often, the rupture occurs while the patient is in bed or about attending to her household duties, or as occurs in most cases, it follows some exertion

as getting out of bed in the morning, lifting some heavy object, straining at stool, sexual intercourse, or a fall.

The most characteristic and constant symptom of tubal rupture is abdominal pain. The patient is very suddenly seized with sharp, severe pain which is usually so intense that she can not aid herself. The pain is variously described as sharp, shooting, cutting and cramp-like. It is located over the ruptured tube, low down in the affected abdominal quadrant in most all cases, although in some, it was referred to the opposite side.

Others complained of the pain being generally over the entire abdomen, but upon close questioning, it is usually found to be more severe over the site of the lesion.

Two of the patients in the series, described their pain as a sudden, severe backache (in the sacral region). This was nicely explained at the time of operation, by finding the ruptured tube prolapsed posterior to the uterus. In each case, the tube was long and the pregnancy had developed in the ampullar extremity, allowing the tube to prolapse because of its increased weight. The pain accompanying the rupture is usually not mistaken.

Associated with the pain are the symptoms of shock and internal hemorrhage. The patient feels dizzy, nauseated, becomes very restless and thirsty, looks intensely pale and faints. Her lips and finger-nails become cyanosed, She becomes extremely weak, and has a rapid, weak running pulse.

Such is the picture of a sudden rupture with severe hemorrhage. When the rupture occurs more gradually and the bleeding is not so great, the symptoms are proportionally less stormy.

When the rupture occurs between the layers of the broad ligament, a localized hematoma results and the symptoms of shock are out of proportion to the anemia.

It is not the rule for patients to die with the first hemorrhage. The acute symptoms subside after a day or two, and the patient commences to gain.

Many patients suffer repeated paroxysms of pain and repeated hemorrhages occur. If operative interference is not decided upon, death may come with the second or a later attack.

The vast majority of patients will give a history of amenorrhea or of metorrhagia. A careful menstrual history is difficult to obtain in some patients, but there is no doubt that in many cases of extra-uterine pregnancy, the menstruation is regular and normal and the

first knowledge of trouble comes with the symptoms of tubal rupture.

The usual history that a patient gives consists in skipping a period and after being over-due for one or more weeks, an irregular bloody discharge appears. The blood which is usually dark and containing no clots may continue for an hour, a day, or for several weeks. All variations of bleeding may be found. With some patients, it will be a mere spotting of blood, while others will flow quite profusely. Profuse bleeding is the exception however, and the amount of blood lost is usually not great. Our observations coincide with those of others that the bleeding is often more profuse when the pregnancy is located in the uterine end of the tube.

The early subjective symptoms of pregnancy are often a great aid to a diagnosis. In the majority of cases, the early symptoms of normal pregnancy such as morning nausea and vomiting, fullness in the breasts, and frequency of urination are present. Colostrum is often present after the sixth week.

Much has been said regarding the expulsion of uterine decidua as a constant finding in extra-uterine pregnancy. The decidua when present comes away either in shreds or as a complete case of the uterine cavity. The size of the decidual cast depends entirely upon the duration of the pregnancy. The cast can be stripped over the finger and is smooth on the inner surface, while the outer surface is rough and shaggy. Hirst obtained a history of expulsion of decidua in less than one-half of his cases and many observers have reported similar statistics.

There is no question but that decidua does not form in all cases of ectopic gestation and the patient, in the majority of cases, is not aware of any shreds or larger pieces of membranes passing. A history of the passage of decidua was given in only 15 per cent. in this short series of cases. A dilatation and curettage was performed in four cases and a microscopical examination of the curettings by Dr. Warthin revealed no decidua. When decidual casts or shreds are recognized in the discharge, or upon microscopical examination, it is a great aid to a diagnosis, but unfortunately, they are found in not more than one-half of the cases.

In most all cases, the diagnosis of extra-uterine gestation can be made or is strongly suggested from a careful history. Upon examination, the breasts usually show the early evidences of pregnancy as seen by their fullness,



the increased pigmentation of the areolae, increased size of Montgomery's Follicles and by finding Colostrum present.

There is often a purplish tinge to the vaginal mucous membrane and the cervix is softened neither are so marked as in intra-uterine pregnancy.

The uterus is enlarged in practically all cases and is softened. The characteristic pelvic finding is the presence of a mass to one or the other side of the uterus. The mass has an elastic, boggy feel. If a broad ligament hematoma has formed, the tumor feels tense and more like a cyst. If the tube has emptied itself at the time of rupture, a mass cannot be so definitely made out, but in those cases, the hemorrhage and shock have been so great, due to the large rupture that the history is unmistakable.

When the tubal rupture occurs into the abdominal cavity, the free blood and clots which form gravitate into the pelvis and a pelvic hematocele is formed. The hematocele gives the posterior cul-de-sac a boggy feel and the posterior wall bulges, due to the weight of the crur above.

The mass is always tender and many times a bi-manual examination causes the patient so much pain that the mass cannot be well outlined. The entire pelvis is sensitive and any pressure upon the lower abdomen always causes pain.

A record of the patient's temperature and pulse-rate are of much value. There is practically always some temperature ranging from ninety-three to one hundred and three degrees which is due to the absorption of the extravasated blood. When the temperature goes above one hundred and three degrees, it usually indicates an infection. It is of exceedingly great importance from the standpoint of treatment to differentiate between an infected and a noninfected uterine. The knowledge of a leucocyte count is of great value in arriving at a conclusion. There is often an increase of leucocytes when no infection is present. Our highest count was fifteen thousand per cubic millimeter with no infection. Four of the cases were infected and the counts ranged from nineteen thousand to twenty-three thousand per cubic millimeter. A high fever, associated with a high leucocyte count are greatly in favor of suppuration. If the diagnosis or suppuration is in doubt, a puncture of the posterior cul-de-sac with an aspirating needle should always be made before opening the abdomen. If blood

or blood and pus are aspirated, the diagnosis is clear.

The diagnosis of an unruptured tubal pregnancy during the latter months of gestation is very difficult, and rarely made. The fetal movements are said to be more vigorous and felt earlier in the pregnancy because of the close proximity of the fetus to the abdominal wall. The characteristic and constant finding is said to be a marked asymmetry of the abdomen. Pressure symptoms upon the rectum and bladder are common. If the uterus can be outlined separately from the pregnancy, a positive diagnosis can be made. The condition should be thought of when a patient goes over her estimated date of confinement some considerable time without having labor pains.

## THE TREATMENT OF WOUNDS.

ROLLIN C. WINSLOW, M.D.

SAULT STE. MARIE, MICH.

The advance in the knowledge of the process of wound repair and of the reaction of the tissues to local infections have placed the treatment of wounds on a scientific basis. It seems, however, to be somewhat difficult to overcome the fruits of the teachings of the early antiseptic days in the minds of some physicians and of most all patients. Beyond doubt, these teachings have, in a large measure, been kept alive through the advertising efforts of druggists and manufacturing chemists.

There are, I believe, many things being done today in the care of minor surgical cases simply because they have been done for many years, and because there is a lack of association between the treatment of wounds and the present-day knowledge of wound healing and the reaction to infection. Although it is very important never to crush or manipulate wounds at the time of dressing, yet many inexperienced assistants, it seems, cannot withstand the temptation to feel of and manipulate wounds on every occasion presented, and there can be no question that this tendency results in the infection of many wounds which would otherwise heal by first intention.

In order to consider the treatment of wounds logically they may be divided into the following:

1. After-treatment of clean surgical wounds (including the recent accidental wounds which permit of thorough cleaning).
2. After-treatment of primarily septic wounds.

3. After-treatment of clean wounds becoming infected.
4. Old wounds healing by inactive granulations.

In the case of the first class the treatment is wholly prophylactic. "Don't meddle." If a skin surface is clean, if the instruments, dressings and hands of the operator are clean and the sutures have not been drawn too tightly, the resulting wound will be clean. All that is necessary to do is to obtain careful hemostasis, to approximate the wound edges and to keep out infection by the means of a light covering of sterile gauze.

Under these conditions the only source of danger of infection is the suture material. At the present time the methods of sterilization of suture materials are so satisfactory that there is little or no danger from this source, except from those sutures which pass through the skin. It is well understood that the bacteria in the deeper layers of the skin cannot be removed by scrubbing or by the application of germicides. A few bacteria probably are carried into the subcutaneous tissue by every suture, but in a very large proportion of cases these are destroyed before they begin to multiply. Skin sutures may well be removed in from four to five days, except in cases where they are used as tension sutures. In this length of time agglutination of the edges has occurred, and a bridge of granulation tissue sufficient to seal the wound has been thrown out.

If allowed to remain longer, the sutures cause necrosis of the intervening tissue and in this excellent culture media the bacteria of the skin are very liable to grow. These infections are not frequently more than stitch abscesses, but they serve to increase the amount of scarring. Occasionally the infection follows the course of the suture and a subcutaneous abscess or phlegmon is formed. To obviate these dangers, we are now using, where possible, metal skin clips. They approximate the wound edges accurately, do not go through the epidermis, and give a less noticeable scar.

Clean wounds should not be drained except in those cases where there is a considerable amount of parenchymatous oozing, as in amputation stumps, breast amputations, etc. Such a drain should be removed as early as possible—in twelve to twenty-four hours. The materials to be used will be spoken of later. It is occasionally necessary to pack a clean wound to stop hemorrhage. This should also be removed at the earliest possible moment, for a

drained or packed wound becomes, in practically all instances, an infected one, and the longer the drain remains in place the greater the likelihood of infection.

After the removal of sutures or clips the dressings are immediately replaced, or a fresh layer is substituted and the wound is not washed or tampered with in any way. A clean wound should not be sponged off until epidermization is complete, as any washing or manipulation before that time will only tend to rub bacteria into the wound and to disturb the granulations.

2. It is in the care of primarily septic wounds, that one hears more frequently the echoes of the "antiseptic" period, and "antiseptic" still to many minds, is the only means of securing surgical results, while, as a matter of fact, antiseptics have but little place in the practice of modern surgery. Aside from hemostasis, the first step in the care of a fresh accidental wound (which we must regard as being primarily septic), is the cleansing, and this is the most positive of the various steps. Cleansing of any fresh wound of great extent should be thorough and carried out according to a definite routine. If necessary to shave the parts the wound should first be covered with gauze and the surrounding area shaved, shaving away from the wound. Next, this area should be thoroughly scrubbed with soap and water, after which it is sponged with alcohol, the latter being used for its fat absorbing and dehydrating powers, and not as an antiseptic agent. Attention is now turned to the wound itself. Foreign particles are removed, ragged edges are trimmed, crushed tissues into which dirt is ground is cut away, hemostasis is secured and the wound is washed with sterile water. The wound is not scrubbed because of the likelihood of rubbing bacteria into the tissues instead of out. Irrigation with large quantities of water is the next step, and the most important one, since in this way bacteria are washed from the surface and not ground into it. If the wound has been seen within a few hours and is a superficial one, it may now be regarded as a clean wound, and so treated. The majority of these cases, however, show signs of infection when seen, or present so many irregularities that thorough mechanical cleansing is impossible. These wounds are either not sutured at all or are sutured with provision for drainage.

Any proceeding which will disturb the granulations and break up the wall of defence formed by the immigration of leucocytes and the pro-



liferation of fixed tissue cells about the healing wound, tends to hinder the reparative and defensive processes. It is logical to conclude then, that the two important factors in the treatment of wounds are the provision for free drainage and non-interference with a reparative process.

How, then, shall these be best accomplished?

Drainage is any provision for the free escape of pathological fluids. This must be understood to mean prevention of the retention of fluids on a free surface, by crusts or dressings, as well as drainage of an abscess or of a body cavity. Drainage of superficial infections may be accomplished frequently by incision alone, but in deeper foci it is usually necessary to introduce some material into the wound for a time, in order to hold apart the edges. The drainage materials commonly used are gauze, soft rubber tubes and the cigarette drain.

Gauze as a drainage material has many uses, but distinct limitations and disadvantages. In a small wound where it is desired to hold the edges apart for a short time, gauze is satisfactory, but it must be remembered that it will drain serum and not pus or blood. It will drain serum for a few hours by capillarity, but after this time the meshes become filled and it becomes a plug and not a drain.

The disadvantage of using gauze is that, if left in place for more than twelve to eighteen hours, granulations grow into the meshes so that its removal is attended by a great deal of pain to the patient and a tearing of the granulating surfaces, opening up new channels for absorption. It is a rather common practice to drain intraperitoneal infections with gauze. Following the removal of these at the end of twenty-four to forty-eight hours, a sharp rise in the temperature and pulse rate is very frequently seen, and it is likely that a fatal termination occasionally results in cases where this is practiced. New areas of absorption are unquestionably opened, and in a patient, whose resistance is already taxed close to the limit, this may be the deciding factor.

The rubber tube drain allows the escape of any fluid which gets into it, but it is apt to produce pressure necrosis of any tissue with which it comes in contact, giving rise to fecal fistulae, hemorrhage from erosion of a vessel, perforation of a hollow viscus ventral hernia, etc.

The cigarette drain, it would seem, combines the advantages of the gauze and rubber drains, can be removed without pain, granulations are not torn up, it is soft enough to avoid the dan-

ger of pressure necrosis, and has the advantage of capillarity.

The prevention of the retention of secretions concerns the problem of dressings. The ideal way of dressing an infected wound of considerable surface area is not to dress it at all. This can be done in large serious wounds which necessitate the patient's remaining in bed. The method is identical in every way with the dry treatment of burns, which has been found so very satisfactory. In this treatment there is absolutely no disturbance of granulations, healing is much more rapid, and less scarring follows than when the wound is dressed. There is, in addition, absence of pain from the removal of dressings.

The reported results obtained by the recent method employed by Dr. Carrel, of the Rockefeller Foundation Institute for Experimental Research, with the Dakin solution of sodium hypochlorite (0.45 to 0.50 per cent.) would seem to indicate that great advancement has been reached in the sterilization of septic wounds with this antiseptic of high germicidal value and of low toxic and irritating quality. The method has not been applied locally, to my knowledge, and its employment requires a rather complicated technic whereby the solution, in a definite chemical concentration, is mechanically delivered to every portion of a surgically prepared wound in a manner insuring its constant contact for a prolonged period (weeks to months).

Patients with minor wounds do not, however, wish to go to bed during the time occupied by the reparative process. These wounds must be dressed to prevent the entrance of additional numbers and varieties of bacteria, and direct trauma to the wound. A loose dressing of dry gauze (sterile) is usually used, and should be changed as frequently as the layers next to the wound become saturated. Hot, wet dressings are frequently of use in infections of the severer types, or where there is a large amount of secretion. This serves two purposes: The moisture prevents rapid drying of the secretion and the sealing of the meshes of the gauze, while the heat promotes an active hyperemia. Boracic crystals are frequently dissolved in the water used, not, however, for their antiseptic action, but because the increase of the concentration of the solution and so prevent maceration of the tissues. To prevent sticking of the gauze to a large granulating surface, it is good practice to apply a thick layer of sterile vaseline or like substance, to prevent the tearing

of granulations during the removal of the gauze. In spite of this, however, there is always some traumatism to a wound at each dressing.

With the possible exception of a dilute solution of Tr. iodine and the Dakin solution, antiseptics that will kill bacteria will also kill the tissue cells or else render them less resistant to the bacteria.

The danger from absorption of an antiseptic from a large wound is great, and bichloride poisoning which was rather common, is occasionally seen at the present time.

Most bacteria which are doing harm are not on the surface of a wound, but below it, and they are not reached by any antiseptic.

3. Whenever infection occurs in a wound which was primarily clean, we must at once remove sutures at point showing redness and apply hot, moist, mildly antiseptic dressings, covered with gutta percha tissue, or oiled silk, and avoid moving and manipulation of the wounded part. If this does not lessen the infection and relieve the symptoms, remove all sutures, "open wide and drain."

4. Occasionally there is seen in a wound an exuberance of unhealthy granulation tissue. The process of repair is here hastened by the cauterization of these granulations with stick silver nitrate, never failing to neutralize, after a few months, with solution of sodium chloride. The wound should not be curetted because the curette does not remove all of the granulations (unhealthy), and breaks through the zone of defence, opening up new channels for absorption.

The treatment of old granulating wounds of poor nutrition, such as chronic leg ulcers, differs in that we desire to stimulate the production of granulation tissue. Infection is a negligible factor here, so long as the surface is not broken. The underlying connective tissue is of a more adult type and bacteria have been overcome. From clinical experience it would seem that certain drugs, such as Tr. of iodine and balsam of Peru, do have a stimulating effect and they are commonly used.

#### TO SUMMARIZE.

1. The treatment of clean wounds consists in efficient prophylaxis and protection of the wound area.
2. The two all-important factors in the care of infected wounds are free drainage and non-interference with reparative process.
3. Antiseptics, with the probable exception

of the Dakin solution, by the Carrel method, are inefficient and are not to be used on account of the resulting injury to the tissue cells.

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### HOSPITAL ORGANIZATION AND MANAGEMENT IN SMALL CITIES.\*

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ST. JOHNS, MICH.

The development of hospitals in small cities is one of the results of progress in modern medicine and surgery. It is in harmony with advanced ideas as regards the conservation of lives and is in response to a demand on the part of the laity for better and more successful methods in the prevention, diagnosis and treatment of disease, and on the part of our profession for an opportunity to meet these demands.

Up to 1895, nearly all major surgical operations were performed in hospitals connected with colleges of medicine. This was because the mortality was so great that physicians as a rule preferred to send their patients away rather than bear the responsibility of such mortality and to let the work be done by men who received a salary and were therefore not dependent upon the success of the work for their professional reputation.

When only one out of six or seven serious surgical operations resulted in the recovery of the patient, as one of our prominent surgeons told me was the case when he was an assistant to a professor of surgery in the eighties, the results were rather discouraging. But improvements in surgery took place, it became easier to obtain trained nurses and certain disadvantages inherent to surgery in hospitals used for teaching purposes became apparent, such as the presence of students, frequency of sepsis due to the crowding of such institutions, publicity of the work, etc., causing many to do or have their surgery done in private homes.

But later, disadvantages inherent to this method were recognized and physicians turned to private and smaller public or endowed hospitals for a solution of the difficult problem of successful surgery. Here patients could be nearer home, be in quieter and more familiar

\*Read before the Montcalm County Medical Society.



surroundings, receive the care of their own physicians, etc.

This problem of local hospitals is now being worked out in many places and each city presents its own particular difficulties, the successful solution of which is necessary to the acquisition of hospital facilities.

The great advancement which has been made in the science of preventive medicine leads us to hope that in the near future nearly all preventable sickness will be prevented and we also hope and believe that the time will come when all unpreventable sickness, if at all serious, will be treated in well equipped hospitals, where all scientific and therefore most successful methods can be carried out in a satisfactory manner. This will mean the greatest good to the community at large and will be of benefit to our profession as well.

One of the first questions that presents itself in relation to a hospital is this: What is a hospital for? Is it merely a convenient place to care for the sick or is it a place where disease can be scientifically investigated, diagnosed and therefore accurately and successfully treated?

This question must be answered by those interested in any proposed hospital, for just as this is decided so will the institution be. If the answer should be that it is merely a place where the sick can be conveniently cared for, experience has shown that such an institution soon gets into disrepute with the laity and about the only way to get patients into it is by the exercise of physical force. This condition of affairs can easily be produced as has been shown in many cases and this means failure for the hospitals where this plan is followed.

There are practically about four methods in vogue for the establishment and maintenance of hospitals in small cities.

First. The hospital owned and operated by some religious body.

Second. The endowed hospital, established through the gift or bequest of a sum of money to be used for hospital purposes, a part of such sum to be used for building and a part for endowment.

Third. The private hospital, which may be owned and run by one or two doctors or nurses and run for profit, catering to the physicians of the vicinity or which may be established by two or more physicians and run on the non-profit paying plan, in order to furnish a suitable place for the care and treatment of their patients.

Fourth. The public or the semipublic hos-

pital, established partly by the gift of charitable citizens and partly by the municipality.

All of these methods have been tried and found useful. The second is by far the easiest for any community so fortunate as to be blessed with citizens wealthy enough and willing to found a hospital. Still a great many communities are not so fortunate and find it necessary to adopt some of the other plans. But whatever plan is followed, after the hospital has been secured many problems remain to be worked out in order that the hospital may prove a success and the greatest benefit be derived from its existence.

It may be taken for granted that no hospital of any kind or of any plan can become a profit paying institution. There are but few exceptions to this rule and it is right that this should be true. Any attempt to exploit for profit the care of the sick in hospitals should be condemned.

Nevertheless, these are very profitable institutions.

First. To the public, as they can care for the sick more economically and efficiently than can be done in private homes and with a lessened per cent. of mortality.

Second. To the physicians and surgeons of a community, because the hospital furnishes them not only a convenient place to care for their patients, but if it is well equipped, enables them to undertake more difficult and important examinations, treatments and operations than would otherwise be possible.

Third. To the patients who benefit by better care and better chances of recovery.

Fourth. They give employment at remunerative wages to many nurses and in some cases furnish a place where those desiring to become nurses can get the necessary training. But as has been already stated, the hospital can never become a paying proposition from the standpoint of dollars and cents. Therefore the one established as a private institution by doctors or nurses to cater to the patients of other doctors, and from which the owners expect a profit, is usually poorly equipped, poorly managed or managed in a mercenary spirit with no attempt at scientific excellence. Such an institution is of little benefit to a community, but the one established by two or more physicians simply as a place where they can treat their patients in a more scientific and therefore successful manner than can be done in private homes and with no expectations of profit from the hospital direct, is certainly a valuable in-

stitution. Such a place, if well equipped and well managed, gives an opportunity for first class work and when controlled by those interested in its success as well as trained in such work, should get the best possible results both in the cure of diseases and in a lessened death rate in all diseases.

Even more valuable in many cases are the endowed hospitals, for these are able by reason of freedom from financial anxiety, to standardize their work at such a high level that only the best trained men will find themselves capable of working therein and their work will naturally reflect the level attained.

The fourth plan, that of the public hospital, is the one most often adopted because it is the one most feasible for many places. This plan while most often useful, or the easiest method of acquiring a hospital is beset with many difficulties and has many problems, the solution of which is necessary if the physicians and people generally are to realize material benefit from the presence of such an institution.

Its success will depend largely upon the attitude taken toward it by the surrounding physicians.

There are two things which should be thoroughly realized by the physicians of a community if the hospital is to be successful.

First. The necessity that the work done in the institution be of a high class, as bad results, whether due to error in treatment, or even if unavoidable, show up more prominently there than in private practice. One bad result in town, another five miles north and another four miles northeast, in the practice of one physician, will excite very little comment as the friends and neighbors of one patient may never hear of the others. But you put the results in three rooms of the same hospital and they will show up all right and in a manner to cause ten times the comment and ten times the amount of adverse criticism of the physician and of the hospital as well, as would occur in private practice.

Second. The absolute necessity of team work in relation to the hospital. Each must give of his best and at the same time encourage his brother physician to do the same. Take the Mayos for example. One of the most important lessons to be learned from their success is the value of team work and co-operation. The Drs. Mayo and their forty co-workers, together in team work do a practice of up in the millions per year. If you take each of the physicians and put him or her in a separate office in

Rochester, Minn., and the surrounding towns, letting each work by himself and in competition with the others, how much practice would they do? We will say they average \$7,000 per year, which would be a liberal estimate. This would amount to a sum far below their earning ability when working together.

As I understand, your hospital belongs to the fourth class, or municipal and privately supported and your problem is one of many. It is necessary that you so arrange and manage it that it will prove a success, as otherwise it will prove a source of disappointment to all who are interested.

The St. Johns Hospital belongs at present to the class of privately owned hospitals, organized on the non-profit paying plan and we feel great satisfaction with the success so far achieved. The beds are kept well filled, with patients constantly on the waiting list. We are planning to enlarge in the near future. Our problem is different from yours, yet much of the experience gained in our work will apply equally well to yours.

Any hospital should have a good set of sterilizers, a well equipped operating room, by all means a laboratory, and if it can possibly be obtained, a first class X-ray apparatus should be installed.

A good system of call bells or lights is necessary. The best is probably the three light system; although a more simple device might do, this is an excellent one and will do much to promote good service.

It is necessary to decide whether the hospital will be run with or without a staff. Both methods have been tried and the method of running without a staff has many times led to failure unless the institution was under the control of the city exclusively or had sufficient endowment to make it independent, and even then the result has not always been desirable. If those having the matter in charge have at heart the true interest of the hospital and desire the greatest measure of success for the institution and therefore for themselves, they will see to it that a staff is organized at the beginning. I know of several instances in which an effort has been made to run without a staff and now the buildings stand empty because of the fact.

By having a staff for this kind of an institution, I do not mean to have a closed hospital or one where all the work is done by the staff, but rather to follow the open plan so that any



physician can bring his patients to the hospital and treat them there.

A very excellent plan is to have the hospital work divided into departments and a well trained and up-to-date man put at the head of each department. Each must be made responsible for the work of his department and should be allowed to make the rules and regulations governing such department, subject to the approval of the whole staff and of the board of directors.

Then for instance, when a physician wished to bring in a typhoid patient, the only thing the head of the department would have to do with the case would be to see by the records that the rules and regulations were lived up to as regards the care and treatment of the patient. Of course there should be rules that every such case should have a complete blood and urinary examination every three or four days and a Wedal, say at the end of five days, with a complete physical examination every second day. Possibly the caloric value of the food intake should be worked out daily in order to insure to each patient the surplus calories of food necessary that nature may manufacture the anti-toxins needed to effect a cure.

The record of this work should be made out daily on the regular record sheets by the physician and the nurse in charge and once or twice weekly submitted to the inspection of the chief of the department. He would, after seeing that the rules were complied with, place upon the record his signature as a sign of approval.

If a surgeon desired to operate upon an abdominal case and the rules required a complete blood, urinary, physical and X-ray examination, the record must in each case, be submitted to the chief of the surgical department and be approved by him before the operation can proceed.

In case a training school should be organized, the chief of each department should be expected to arrange the necessary lectures for his department.

This work should all be done without pay and purely for the good of the hospital. Possibly charity cases brought in could be placed in the professional care of the chief of the department to which they belong. In this case, each chief of a department would have nothing to do with the treatment and care of the patients of other physicians except to see that the rules of his department were lived up to at all times. He need not even see such patients. He should have no privilege of withholding

his approval if the rules were adhered to, and in case of dispute the question could be referred to the entire staff for the board of directors for final decision.

Each hospital needs a superintendent, an assistant superintendent, one or more nurses on general duty and a cook and janitor, which will complete the necessary force.

I believe it will be well, in the process of organization, to adopt a system of rules, few and simple, but sufficiently clear to define the duties of each and every employee of the hospital. If this is not done confusion and friction is the result.

A definite system of records should also be adopted for the various departments and every one working therein should be expected to record every examination made and every treatment used. Records of anesthesia should also be made.

A careful system of records will not only be valuable for future reference but will very much conduce to better and more accurate work. All this will tend to prevent bad or careless results and by holding every one to a high standard, good results will be assured. Many of the pitfalls of failure will thus be avoided and after a few years, instead of becoming as so many such an undertaking has become, a reproach to the community, yours will stand as a monument to the wise forethought of its promoters and be recognized by every one as a blessing and an ever present help in time of need.

In fact the question is simply this. In any community establishing a hospital, the physicians of that community must deliberately decide whether they will, by working in a spirit of co-operation establish the institution on a high scientific plane and bring themselves up to that plane or establish it on a lower plane and in the end make it a failure, at least from the standpoint of results obtained.

This question must be decided and it is better to decide it in the beginning than afterward.

Gentlemen, your desire to establish a hospital in your city shows that you are progressive and broadminded, for this work is along the line of modern progress in our profession and it is my sincere belief that you will be able to establish your hospital in such a manner as will reflect credit upon yourselves, insure success to the institution and therefore increased prosperity to your profession in the beautiful city of Greenville.

## TWO CASES OF VAGINAL CESAREAN SECTION FOR ECLAMPSIA.

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CASE 1. Mrs. C. L., Prov. Hospital No. 410, primipara, housewife aged 32 years. Family and personal history negative. Entered hospital at 11:30 a. m., Jan. 28, 1917, in state of eclamptic coma with frequent convulsions. She had last period normally July 4, 1916, and suffered from toxemic, vomiting the following three months. Urine was normal through pregnancy to Jan. 26, the date of last examination. On January 27 patient suffered from headache in the morning. This became more intense during the day. First convulsion at 2 a. m., January 28. From this time convulsions repeated from fifteen to twenty minutes. Coma commenced about 4 a. m. Seen by Dr. H. Maus at 11 a. m., was given morph. gr.  $\frac{1}{2}$ , scopolamine gr.  $\frac{1}{100}$  by hypo, and sent to hospital. Measurements interspinous 23 cm, intercrestal 26 cm, intertrochanteric 31 cm, ext conjugate  $16\frac{1}{2}$  cm, true conjugate 9 cm. Fetus was in right occipito anterior position with the head unengaged. Blood pressure 204-140. Convulsions every four to five minutes. At 12 noon vaginal cesarean section performed by Bumm method, single anterior incision 10 cm long in cervix, which was intact and hard. The head was pushed aside externally and an easy bipolar podalic version performed, the right hand bringing down the left foot. Easy extraction of 1900 gm, 40 cm fetus followed. This was in a state of pallid asphyxia and expired in thirty minutes. Placenta removed manually; excessively small amount of hemorrhage, no convulsions after operation. Coma continued until morning of January 31st. Patient made normal recovery. February 10 uterus under symphysis; vaginal examination uterus in almost complete involution, anteflexed, normal position, movable; line of suture healed: os  $\frac{1}{2}$  cm open, adnexa normal. Left hospital February 10, 1917, normal except for urine which showed hyaline and granular casts and serum albumin. B. P. 140-95.

CASE 2. Mrs. E. G. Prov. Hospital No. 717 was sent to Hospital suffering from extreme headaches, February 18, 1917. Mother died of puerperal sepsis at 35 years. Patient, a primipara 27 years of age, had last period normally June 21, 1916. Had slight hyperemesis first few weeks of pregnancy. Skin was slightly jaundiced. Abdomen showed distention of thirty-four weeks pregnancy, fetus laying in right occipito anterior position with fetal heart sounds 140, rather weak. Measurements interspinous 26 cm, intercrestal 29 cm, intertrochanteric 31 cm, external conjugate  $18\frac{1}{2}$  cm, diagonal conjugate 12 cm. Blood pressure 170-125. As patient was being examined at 12:30 p. m. first convulsion began. Convulsions succeeded at half hour intervals with patient unconscious between. While waiting for the husband a high enema was given, also morph. gr.

$\frac{1}{2}$  per hypo. Urine per catheter showed casts, hyaline and granular, great amount of serum albumin. At 4 p. m. brought to operation room; cervix intact and fairly soft, head above inlet. Vaginal cesarotomy after the method of Bumm. Vertical incision about 10 cm long, forceps delivery at inlet. After delivery uterus rather soft. Upon gentle massage, placenta dropped out, following this a rather severe hemorrhage. Pituitrin 2 cc. and ergotinal 4 cc. were given by hypo. After patient returned to bed 20 ozs. of 5 per cent glucose solution given by Murphy drop. B. P. 100-65. Patient conscious at 7 p. m. Made uneventful recovery; discharged March 4, 1917. March 2 examination showed uterus in good involution anteflexed, freely movable, incision healed, adnexa normal, B. P. 105-70. Urine slight amount of albumin. Fetus lived about  $3\frac{1}{2}$  hours.

Case 1 shows clearly the fallacy of reliance upon ordinary urinary tests to indicate the presence of toxemia of pregnancy. Although there were casts and albumin at the time of seizure, these were absent two days before. The ordinary routine urinalysis is essential in prenatal case, but it does not always give warning of a dangerous state of toxemia.

While a single reading at the time of the convulsions without preliminary readings is of little value, it is worthy of note that these were of the usual high pressure type. The loss of an excessive quantity of blood in the second case brought the pressure down at an alarming rate. This same accident cleared the system of sufficient toxins to clear the mind of the woman in a few hours. The first case which had a subnormal flow of blood post partum showed a slower decrease of blood pressure. Also the mind did not clear until the third day. A greater blood letting would probably have cleared her mind more rapidly through lessening the circulating toxins, also by lessening the congestion of the brain by lowering the pressure.

Too often the subjective symptoms of toxemia of late pregnancy are neglected by attendants. There is scarcely a case which goes to eclampsia which does not give preliminary subjective signs. Among the ordinary signs are somnolence, insomnia, epigastric distress, mental depression, dizziness, nausea; but headache is the most common and constant. Such complaints properly considered should lead to further investigation which would detect the true state of the patient.

These cases are typical ones adaptive to this operative procedure. Both developed eclampsia and suffered from coma weeks before term. Neither had begun labor, both had intact cervixes with presenting part unengaged. Blood pressure in each was alarmingly high.

The lives of the feti were not to be considered because of prematurity and the degree of toxemia present, so that any procedure would dismiss their rights in an effort to save the mother.

608 Mt. Elliott Ave.



## TRANSACTIONS

OF THE

## Clinical Society of the University of Michigan

Stated Meeting, February 7, 1917

The President, CARL D. CAMP, M.D., in the Chair  
Reported by REUBEN PETERSON, M.D., Secretary

## TREATMENT OF CHRONIC NEPHRITIS.

NELLIS B. FOSTER, M.D.

(From the Clinic of Internal Medicine, University Hospital,  
Ann Arbor, Michigan.)

The principles underlying the treatment and management of chronic disease are not those which make a strong appeal with acute disorders. There is no dramatic element in a stubborn long-drawn-out battle with an adversary that invariably claims the field. But that the inevitable can be postponed, in some instances for years, by scientific and persistent care, is no little thing and that sort of fight has its attraction for not a few of us.

It is only by chance now and then that we have opportunities of studying the early stages of chronic progressive diseases such as is exemplified by chronic nephritis. At these times there are no symptoms and perhaps no evidences of disease except those disclosed by functional tests. The life insurance companies discover some of these cases and the very pertinent question then arises: what can we do to check the progress of the malady? This brings up the question of etiology and we know so very little about it, but in my opinion this type of case should always be investigated for some kind of infection. It is well recognized, yet often forgotten, that syphilis may give no intimation other than renal disease and I am convinced that by the discovery of a latent syphilitic infection followed by treatment for it some of my patients have been rescued from irreparable, frank nephritis. A second source of injury we are not likely to forget during the present furor over focal infection. Acute nephritis is not a rare sequel to follicular tonsillitis and no strain on the credulity is required to believe that chronic infections of the tonsils or elsewhere may give origin to renal diseases.

These foci, when discovered, should be treated radically, as much so when associated with nephritis as with arthritis. I can not attempt a complete résumé of infections but I have sketched the principle we must follow with these incipient cases. One must not forget metallic poisons and the chemicals so largely employed in the arts; nor the fact that renal calculus is more common than our figures show and that a stone in one kidney induces degenerative changes in both.

The early cases of nephritis are, however, but exceptions, the vast majority are well advanced into the stage of subjective symptoms of disease before a physician is consulted. Now the manifestations of nephritis are diverse enough so that difficulty in recognizing some of the pictures is common.<sup>1</sup> For example, a patient presents symptoms and signs referable to cardiac incompetency—dyspnea, edema, and a mitral systolic murmur. The blood pressure may be within normal bounds and if there be albumin and casts in the urine it is as well explained by passive congestion as by nephritis. These cases are treated for the cardiac disorder, quite properly perhaps, but unless one is vigilant and notes changes frequently an important fact will escape; namely, as the patient improves and the symptoms of cardiac disorder disappear, the blood pressure gradually rises until it often happens, when the attack is over, we find a blood pressure of 120-130 diastolic and 180 systolic. What has happened is very simple to explain. Chronic nephritis of one type induces a high blood pressure, to meet which the heart hypertrophies. Then a time comes when some myocardial change occurs and the heart dilates, resulting in the symptoms enumerated and with the dilatation, of course, the blood

1. Many cases of cardio-renal disease are sent to this clinic for goiter operation. The symptoms are misinterpreted as due to simple goiter.

pressure falls to the figure which deceived us in the beginning. These cases are very common. An increased blood pressure, systolic or diastolic, or both, usually means kidney disease. The pure arteriosclerotic type is exceptional and insufficiently demonstrated.

This brings me to certain matters which I must discuss before I can explain rational therapeutic procedures in nephritis.

In a period not yet remote the study of a case of nephritis consisted in an endeavor to arrive at an anatomic diagnosis. Was a given case one of tubular nephritis, glomerulonephritis, or any of the half dozen types of pathologic change described by the morbid anatomist? Now these anatomic changes have a significance to those who are studying structural change. They are useful and necessary, but for us clinicians a structural change, diagnosed ever so correctly, is absolutely useless until we can translate its significance into terms of function. And when one has studied many kidneys under the microscope it becomes increasingly evident that in different areas of the same kidney the type of lesion varies; here the glomerules chiefly have suffered, there the tubules; and with experience one learns that all types of lesion may be found in the same kidney, if one but hunts long enough. And then too, who can say that because a cell looks normal, its function was normal. It is not rare to find at autopsy, where death was due to some disease other than nephritis, kidneys damaged and atrophied to a degree seemingly incompatible with life. Is it not clear then that what the clinician needs to know with respect to any case is not a picture of the kidney structure, but rather a knowledge of the kidney function—in what respect and to what degree is the kidney function below normal? Investigations bearing on this field are being pursued in many hospitals and laboratories at present. The normal function of the kidney is to excrete certain nitrogenous waste products, salts and water, hence defects in function mean defective excretion of some one or all of these substances. And with any individual case it is requisite for us to know with which substance the kidney has difficulty and how serious the difficulty is before we are in a position to begin treatment. At present we recognize three types of defective function in renal disease.

- (1) Nephritis with salt retention.
- (2) Nephritis with nitrogen retention.
- (3) Nephritis of a mixed type, i. e., both salt and nitrogen retention.

This classification is purely physiologic and gives no reference to the structural anatomy. That may be added, however, if one becomes convinced as to the nature of the anatomic change present. It is evident then, I think, that if we can recognize these types of perverted function which I have enumerated we are in a position to institute a protective therapeutic regimen. Conversely it is absurd and probably injurious to exact measures not required, as, for example, restricting a nephritic patient to minimal amounts of salt when there is no defect in salt metabolism. Hence we must know just exactly what we are doing if good results are expected. In the hospital we have formed the habit, begun as an investigation, of testing out each patient with respect to the nitrogen, salt, and water metabolism, much in the way a diabetic is studied for carbohydrate tolerance. The degree of study is possible only in well organized clinics and I think that we now have sufficient information as to certain essential facts so that we can use more direct methods to learn what is requisite in a case study. With each case of nephritis we need to know, as I have pointed out: is there defective metabolism of salt, of nitrogen, of water? In the first place if there be edema and if the heart is beyond suspicion one is justified in concluding that salt and water are handled in an abnormal manner. If there is also a high blood pressure the probability is that nitrogen waste also is being retained in blood and tissues. When there is no edema, a high blood pressure and a low phenol-sulphone-phthalein excretion indicate nitrogen retention. If means are at hand the nitrogen retention can be demonstrated by determining the urea or nonprotein nitrogen of the blood and with edema probably a single twenty-four hour collection of urine would show a sodium chloroid content so low that it would be confirmatory. In the course of rather elaborate studies both in the wards and laboratory I have had charts kept of the results of the various examinations and correlated these findings with the metabolism studies of the same patients. A considerable number of cases have been so studied and these rather significant points seem to result. A schematic arrangement facilitates clarity.

*Edema + retinal edema* indicates *chlorid* retention.

*Edema + low phthalein index* indicates *chlorid* retention.

*Elevated blood pressure + retinitis* indicates *nitrogen* retention.



*Elevated blood pressure + low phthalein index indicates nitrogen retention.*

*Elevated blood pressure + edema indicates chlorid and (probably) nitrogen retention.*

*Elevated blood pressure + edema + low phthalein index indicates chlorid and nitrogen retention.*

These are frankly only probabilities and there are exceptions, and with our present knowledge I know of no way to attain definite facts except by use of laboratory methods. Defective excretion of sodium chlorid is easily demonstrated if a diet of known salt content be given and the urinary chlorid estimated. Nitrogen retention can be shown readily by a quantitative analysis of the blood for either urea, or total nonprotein nitrogen; or possible, for creatinine alone. These methods require, however, the laboratory and the services of a competent chemist.

After having found out what type of physiologic defect a given case represents the principle of treatment is to protect that weakened function. The same principle we employ with cardiac decompensation; namely to lighten so far as possible the work of the heart by imposing complete rest. Let me take up first nephritis with chlorid retention and for clarity and definiteness cite one case as an example. Case 77 was a man 32 years of age, who complained of a gradual loss of strength for a year; some swelling of his ankles in the beginning became more pronounced until he could not lace his shoes; for a month he had dyspnea on any exertion. His physician examined him and diagnosed nephritis and advised him to submit to a period of study. The examination showed slight general edema, most notable in the legs; no cardiac hypertrophy nor evidence of valvular defect; the blood pressure averaged 126 systolic and 70 diastolic. The retinae appeared normal. A twenty-four hour specimen of urine measured 740 c.c.; contained much albumin and many casts. On a diet containing 8 grams of salt his average excretion for three days was 6.1+ grams (18.5 grams in three days), thereby retaining 5.5 grams of salt in the period ( $24 - 18.5 = 5.5$ ). A phthalein estimation showed 52 per cent. recovered. Blood analyses gave normal figures for the nonprotein nitrogen. In brief, the case was one of the chlorid retention type without notable disturbance in nitrogen excretion. By analogy with cardiac disease the rational procedure is to limit the amount of sodium chlorid ingested to within the amount the kidneys can excrete. In the case cited the

salt taken should be not over five grams. In practice outside an institution it is easier to have for these cases a set diet which contains a minimal amount of salt. Such a diet may contain fruit, milk, cereals, sweet butter, and unsalted bread.

#### Breakfast:

Apple, baked or stewed

A cooked cereal (no salt added) with cream and sugar

Unsalted bread toasted, sweet butter

Caffein free coffee with cream.

#### Dinner:

Cream vegetable soup

Two eggs as omelette with tomato or onion

Unsalted bread and butter

Rice or tapioca pudding.

#### Supper:

Cereal with milk

Unsalted bread and butter

Stewed fruit.

A diet of this kind puts the demands on the kidney to excrete salt at the lowest possible level. With this method many patients show prompt improvement by diuresis and a rapid subsidence of edema. With others the improvement is slow and with some there is no visible betterment at all. Even when the edema clears up promptly and complete the persistent marked albuminuria is evidence that we are not treating the disease but only one of the consequences of the disease. But we have at least removed an overload and thereby given opportunity for diseased cells to become normal and tissue to regenerate. Nephritis with chlorid retention is apt to be a protracted and tedious disease. The malady has the ear-marks of a chronic intoxication and many at present are disposed to hold some type of infection responsible. To me it seems clear that the kidneys are not alone involved in the disorder but it happens that disturbed function with these organs more quickly induces visible signs.

When the immediate urgent symptoms have been removed or their intensity has diminished all of the cases of this type must be most carefully examined for evidences of infections. Foci are not always found, and sometimes when they are found and eradicated improvement does not ensue; yet occasionally such excellent results are secured that the chance can not be neglected. In brief, these cases with symptoms must be studied in the same way that one studies cases of simple albuminuria when no symptoms, such as edema, is present. The im-

portant consideration for the patient is the discovery of the cause of the trouble.

Before leaving this type of nephritis I wish to mention some methods of treatment that have gained an unearned favorable repute and first among these is perhaps the hot pack or sweat bath. In the first place we now know from careful measurement and analysis of sweat that the salt lost by nephritics in this way is very slight in amount. It is also questionable to say the least, whether it is advisable to abstract the water from edematous tissues and leave salt and other substances in them in the resulting higher concentration. And finally it has been recognized for a long time that free diaphoresis will with some cases induce uremic symptoms. With these considerations in mind the hot pack does not seem rational. Practically I have watched its use for years past and I have very seldom seen any improvement in a patient's condition except with cases where the heat induced diuresis. A hot compress over the kidney region will then produce the same result and is devoid of danger and does not subject the patient to a weakening and exhausting procedure.

The question of a diuretic arises at some time with every protracted case of edema. With nephritis diuretics that act on the kidney should be avoided. Their effect is due to irritation and the renal tissue is already sufficiently irritated. When the edema is due to cardiac disease then at times diuretics are of some value, perhaps, and may possibly increase the effect of digitalis; but with pure renal disease their use is not rational and I believe not practical.

Chronic nephritis of the type associated with nitrogen retention is one of the common diseases. Directly or indirectly this disease ranks among the chief causes of death in this country as shown by the mortality statistics. A very large percentage of all cases of high blood pressure are essentially cases of renal disease. Although some cases of hypertension do not develop characteristic signs of nephritis and a very few of these cases do not show nephritis at autopsy, yet this is exceptional and the fact remains that unexplained hypertension is probably nephritic in origin. An explanation of the physiology of this phenomenon is yet wanting. But because it is so frequently associated with nephritis, often the first notable sign, and is of itself directly responsible for several morbid states it requires some special comment in this place. The burden thrown upon the heart by a blood pressure persisting from twenty

to forty millimeters of mercury above the normal is quite obvious, and when one considers the tendency to myocardial degeneration in association with renal and arterial disease, cardiac dilatation and its train of symptoms is explained. Likewise cerebral hemorrhage needs no comment. Obviously, then, hypertension in itself may be no insignificant menace. The only method of control which has met with any degree of success in my experience involves a complete revision and rearrangement of the life and habits of the patient. Which factor is of most importance I do not know. A marked reduction of diet is indispensable; so is a curtailment of business activity. Some adjustment of the rigor of exactions may be made for the needs of the patient but as a rule the dietary should be the lowest compatible with health maintenance, and it is remarkable how little food is required by adults past the prime of life, and how easily the patient fits himself to the restrictions provided the physician sees to it that all foods that especially entice the appetite are crossed off the list, two small meals a day, a very low protein intake—forty grams at most. The next consideration is a readjustment in fields of activity so that responsibilities and worries are unloaded. This is most important with men who are actively engaged in large affairs. And finally a surplus of rest in bed, by which is meant considerable over the conventional eight hours out of the twenty-four. This is a considerable requirement to demand of a patient but the remedy is for a desperate disorder and the sense of well being attained is ample recompense. With some cases the fall in blood pressure and coincident improvement in health following these restrictions is remarkable. With advanced cases a benefit can usually be secured although a normal blood pressure is seldom attained.

It is perhaps well to explain what is meant by nitrogen retention. Essentially it is simply failure of excretion of nitrogen. If a normal adult take ten grams of nitrogen daily in his food he will be found to excrete the same amount—that is to say he is in nitrogenous equilibrium. Every healthy adult tends to be in this state. During the period of growth less nitrogen is excreted than is ingested, the difference being retained for the construction of new body tissue; the same is true during convalescence after wasting disease such as typhoid. But with these two exceptions—adolescence and convalescence—the retention of nitrogen indicates kidney disease and the retained nitrogen



can be detected as an excess of urea and other urinary bodies in the blood and tissues as Bright pointed out. The failure of excretion of the products of metabolism is attended by symptoms and it would be in accord with general biologic laws if it were proved that excretory substances are injurious to the organic tissues.

The first principle in the treatment of this type of nephritis is evident from the foregoing considerations. The amount of nitrogen waste to be excreted must be reduced and the only way to secure that end is reduction of the protein food taken in. A low protein diet that we have used consists of a daily allowance of one pint of milk, four slices of bread, two potatoes, rice, green vegetables, butter, fruit and sugar. This diet taken in ordinary quantities will approximate forty-five grams of protein daily (seven to eight grams of nitrogen). With very sick patients it is too much and should be reduced.

The second principle in treatment depends upon the "failure or concentration" so called. The low specific gravity of the urine in typical cases of advanced nephritis is familiar. An earlier and more general manifestation relates to the nitrogen percentage. Whereas with normal persons the kidney is able to excrete urine containing .2 per cent. of nitrogen with ease, with nephritics of this type the urine may not contain over 0.5 per cent. of nitrogen. Now what does this mean? The average normal person excretes daily about 1200 c. c. containing 1.5 per cent. of nitrogen or eighteen grams. A nephritic taking the same food can not excrete a urine of higher concentration than 0.6 per cent., let us say. Then if his urine volume is 2000 c. c. he excretes but twelve grams of nitrogen—a nitrogen retention of six grams. It is evident that he must put out 3000 c. c. of urine daily if he is to get rid of all his nitrogen waste.

$$1200 \text{ c. c.} \times 1.5\% = 18 \text{ g.}$$

$$2000 \text{ c. c.} \times 0.6\% = 12 \text{ g. (6 g. + bal.)}$$

$$3000 \text{ c. c.} \times 0.6\% = 18 \text{ g.}$$

In a series of metabolic experiments it was demonstrated in my clinical laboratory, that retention could be produced at will with nephritics by changing the volume of water drunk.<sup>2</sup> This gives us the next principle in treatment—namely give large amounts of water and relieve the diseased kidney of the burden of concentration. In practice some pleasant beverage is usually better taken than water; lemon-

ade answers the requirements. It is best when commencing this treatment to give two liters of fluid a day, two days, and collect and measure the urine each day in order to find out whether water is well excreted. If water is excreted freely than gradually increase the fluid intake up to three or even four liters per day. Now we must not lose sight of an essential fact in this procedure, namely that the burden of the disordered function is being transferred to the heart. Pumping this extra water through the circulation means foot-pounds of extra work and occasionally edema develops as a result of cardiac insufficiency. With a majority of cases where edema resulted from this "forced fluid" method of treatment a correction of this symptom can be effected by the use of digitalis. With some cases, on the other hand, it becomes evident during the first two days that water is not well excreted; there is little or no increase of urine volume in response to increased intake of water. One should then try the effect of "drink days"—two or three days a week when the intake is considerably augmented. This plan permits of excretion of the excess of water during the interval days when the intake is less. A moderate amount of edema, however, is not to be regarded as a sufficient reason for reduction in water ingest. By contrast with the sequelae of marked nitrogen retention edema is relatively insignificant.

The principles already outlined point the way in the treatment of mixed types of nephritis and further discussion is unnecessary.

### REPORT OF TWO CASES OF PULMONARY TUBERCULOSIS PRESENTING CERTAIN POSSIBLE ERRORS IN DIAGNOSIS.

MARK MARSHALL, M.D.

(From the Clinic of Internal Medicine, University Hospital, Ann Arbor, Michigan.)

There is nothing at all unusual about either of these two cases. In fact, it is because they are rather common that I wish to call your attention to them. They represent certain errors in diagnosis that I think are worth reviewing. The first is a case of a young man who insisted that he had lung trouble. He was repeatedly examined and assured by a number of competent men that there was nothing to be found on physical examination, and if you were to examine this patient, I am sure you would agree to those findings. However, a review of the history of the case gives one the diagnosis. There was a history of night

2. Amer. Journ. Med. Sciences, 1916.

sweats and of hemorrhage about a year or two previous to the time he presented himself for examination. The X-ray plates show extensive fibroid infiltration particularly on the left. This might be expected to give diminution of resonance but there is sufficient compensatory emphysema to give good resonance. There were no signs of active tuberculosis, no râles to be heard at any point over the chest and the percussion note was the same on both sides. While the extent of the excursion of both sides might have been somewhat diminished, yet the lungs themselves were rather voluminous so that the man presented a chest of fair size and shape. This is a mistake that is very commonly made and I would call attention to it not because the diagnosis is so difficult when the case is carefully studied, but because of the fact that the physical signs failed to reveal the process.

The other case is one in which a diagnosis of tuberculosis had been made by two or three observers on the physical signs. The patient was a young woman and in a routine examination she was told that she had an apical lesion in the right apex which extended well below the right clavicle. This diagnosis was made because of a rather intense bronchovesicular breathing over that area. There were no râles so the patient was told that the condition was latent but that she should be careful about her mode of life in the future. In this case the history failed to reveal anything suggesting tuberculosis. She was very slight in build, of neurasthenic temperament with gastric disturbances which led her to reduce her diet to a minimum as the result of which she had been below weight for a number of years. Her only complaint was weakness and exhaustion occurring after a very ordinary amount of work.

The error occurred here through failure to make a comparison between the apices. On listening to the left apex a very loud vesicular breathing was heard and below the clavicle it was almost bronchovesicular. On the right it was so intense that if that apex were examined alone it would certainly suggest a lesion.

I am presenting the X-ray plates of both cases but not as a final proof of the diagnosis for in each instance I think the diagnosis could have been arrived at by a careful scrutiny of the history and physical signs.

#### DISCUSSION.

DR. JAMES G. VANZALUWENBURG: This is a subject that lies fairly close to my heart. I see many of such cases in which there is a difference of opinion between different consultants, and which,

as I think, are finally correctly interpreted when they come to the X-ray room. I have become very skeptical of the physical findings unless I am fairly certain that the man who has made the physical examination is an expert, and often an expert will go wrong. My attitude has been that I can only add my data to that of the others, but none the less, I believe the X-ray evidence should be taken with a little more weight in many cases. These two cases under discussion of course are outstanding cases where the diagnosis could have been arrived at by more careful, thorough clinical examination. But there is a class of cases repeatedly coming to me, often merely to satisfy the patient's own curiosity, that have definite radiographic signs in which no clinical signs can be elicited. Most of these patients are told "It probably does not amount to much if there is anything there at all," and they are not diagnosed as tuberculosis. I think it is more consistent to classify these as tuberculosis than what was done seven or eight years ago when one of the men in this school made a report on a large series of cases of incipient tuberculosis in which a year and a half later a relatively large number had recovered. I am perfectly satisfied that a number of these patients had no tuberculosis. I have repeatedly shown in this Society radiograms of people in whom the diagnosis was only made by the radiograph, so that I think I need say no more.

### TRANSPLANTATION OF THYROID TISSUE.

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(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan.)

The obvious value of the successful transplantation of thyroid tissue into cases of cretinism and myxedema has been the basis of my experimentation along these lines.

There are in the literature records of many experimental thyroid transplantations not only in mammals such as dogs, guinea pigs, rats, mice, cats, sheep, pigs and rabbits, but amphibians, fish, birds and mollusks as well. Some investigators have attempted to transplant thyroid and other glands of internal secretion from one species to another of the same order, and even into species of a different order, but none of such experiments has been uniformly successful. The only attempt at transplanting tissue from a frog into a man that is reported as successful was that of transplanting epithelium from the frog's dorsum into the arm of a man. Even here the epithelization may have taken place in spite of the transplanted frog epithelium. The transplants extensively used are the autoplasmic and homeoplasmic or iso-transplantations. The sites chosen to transplant thyroid tissue have been quite numerous.

Stich and Mattas transplanted thyroid gland by means of blood vessel sutures in dogs and



succeeded in three cases out of ten in autoplasmic grafts. Cristiani transplanted into the subcutaneous tissue such as the ear of rabbits, as this method permits better observation because of the size, transparency and vascularization of the graft. (1894-1906.) Salzer prefers intramuscular transplantation into the abdominal wall. Seman and Kocher in 1908 transplanted thyroid into the diaphysis of the femur. Payr transplanted thyroid into the spleen in 1906. He selected it because "the spleen possesses, thanks to its altogether peculiar and rich blood supply, unusually excellent conditions for transplantation of all kinds of tissue." The circulation is rapidly restored, a relatively small proportion of the transplanted part is sacrificed to central necrosis, and the processes of regeneration are more active and more extensive than in any of the methods of transplantation heretofore employed. The chief argument against transplantation into the spleen is the danger of hemorrhage. Chief among technical features are the use of the transplanted organ as a wedge into the splenic wound and of the omentum as a support for the stitches and a covering for the line of incision in the spleen. By this method Payr was able to keep splenic transplantations alive as long as 300 days. Homeoplastic transplantation of thyroid in man has been tried with very little success.

Payr was able to transplant successfully thyroid tissue from a perfectly healthy mother into the spleen of a totally imbecile child six years of age with severe infantile myxedema which had been treated by feeding thyroid for a period of three and one-half years without effect. The result somatically as well as intellectually was highly satisfactory. W. E. H. Groves and Cecil Joll report in the *British Medical Journal*, December 24, 1910, an interesting case of exophthalmic goitre treated surgically by two operations. Since there was very little thyroid and parathyroid tissue left after the second operation, symptoms of tetany appeared which were relieved by ingestion of thyroid gland. Marked improvement was noticed after grafting a piece of thyroid together with parathyroids from another patient. However, the isotransplantation or homeotransplantation of thyroid in the hands of many workers has been uniformly unsuccessful. Stich and Mattas transplanted thyroid by means of blood vessel suture in all their homeoplastic cases, but the grafts did not take.

Hesselburg noted that both homeo and autografts undergo certain changes. At first both

show central necrosis, the colloid substance diffusing through the surrounding tissue, the acini collapsing while the secreting cells of the autograft rejuvenate. Colloid is secreted in the acini and function is normal in ten or twelve days. Homeografts, on the other hand, do not regenerate; lymphocytes and leucocytes collect about the graft forming a barrier for nourishment, and many of the leucocytes carry away the dead cells of the isograft. The young fibroblasts destroy the foreign bit of tissue, apparently acting like osteoclasts in the osteogenic process in long bones.

In 1911 E. A. Smith of London made the assertion that "no successful case of homeoplastic transplantation of thyroid glands by vessel suture method had yet been reported. Several cases of homeoplastic transplantations in human surgery by methods other than vessel suture have been reported, but one proof is wanting in all, namely a subsequent removal and microscopic examination of the graft."

The non-success in isoplastic transplantation of thyroid gland is, I believe, due to the chemical differences in the tissues of the same species. It is a well known fact that hemolysins, precipitins and agglutinins are formed on injecting the blood of one animal into another of the same species and no doubt cytolyins and isolysins are formed. Usually, however, powerful products of this nature are not found in the blood of species of the same order, indicating that the biochemic conditions in animals of the same species are not very dissimilar. It is plausible that in a small percentage of cases of transplantation of tissues into animals of the same species very little isolysin will be produced, making the homeoplastic transplantation or isotransplantation of highly organized tissue possible. At the present time when transfusion of blood is to be performed the blood of the donor and the recipient is tested for hemolysins. I believe that in cases of transplantation of thyroid from one individual to another, the blood or humors ought to be similarly tested for isolysins. This is a feature that to my knowledge has not been worked up.

The success of transplantation of thyroid whether autoplasmic or homeoplastic depends on the following factors:

1. There must be perfect asepsis in technic.
2. The transfer must be rapid.
3. There must be minimum manipulation of the transplanted tissue and the recipient organ, and crushing of the gland should be avoided.



4. In case of transplantation into spleen, hemostasis is essential.

5. Deficiency must be created greater than one-half the total internal secretion of the gland transplanted in order that the autotransplants may "take," grow and functionate. (Halsted).

6. In case of homeoplastic transplantation of thyroid it must be determined beforehand that no isolysin will be produced in the humors of the donor or recipient.

My first experiment was an attempt at transplantation into the diaphysis of a long bone after the Kocher method.

November 2, 1915, under ether anesthesia, the right hind leg of a dog weighing 25 pounds, was prepared. The usual precautions were taken for asepsis and an incision was made over the anterolateral surface of the left tibia. The skin was retracted and the periosteum incised and elevated. A cavity was chiseled into the marrow about one inch long and half an inch wide, and a silver ball about the size of a large pea was placed in it. The periosteum was sutured with linen thread and the wound closed in the usual manner. The dog was under the anesthetic about three-quarters of an hour and reacted well. A plaster dressing was applied to the leg of the dog in order to keep the wound aseptic but was not effective. The silver ball was lost and the dog developed traumatic osteomyelitis. We gave up this method because of infection which was easily introduced into the wound on account of its shallowness and accessibility to the animal's tongue. Later thyroid tissue was transplanted into the spleens of three dogs, two of which were prematurely killed in my absence. However, both dogs were healthy and did not show any signs of strumiprival myxedema four to six weeks after operation.

The third case was that of a female dog weighing about 25 pounds, operated under ether anesthesia January 19, 1916. A collar incision was made around the neck and the left lobe of the thyroid removed in its entirety. There was no other lobe of thyroid found on either side of the trachea. A left rectus incision was made and the spleen delivered through the opening. Two incisions were made into the spleen, a perpendicular one at the upper pole about two inches long and a horizontal one at the lower pole about the same length, both incisions resembling a pocket. Then two slices of thyroid tissue removed a few minutes previously, one-sixteenth to one-eighth of an inch in thickness and about the size of a quarter, were placed into these two incisions in the spleen. Hem-

orrhage was controlled by darning the spleen with two mattress sutures of silk thread. The wound was closed in the usual manner. February 17, 1916, the dog was still alive and doing well. No symptoms of cachexia thyreopriva were noticed. At no time did the dog show any symptoms indicating deficiency of internal



Fig. 1. Section of thyroid transplanted into the spleen. Low magnification. Thyroid tissue in the center with colloid in the acini. There is suggestion of capsule formation.



(Fig. 2. Section of thyroid transplanted into the spleen. (High magnification). One can see the cuboidal cells without basement membrane characteristic of thyroid tissue.

secretion of thyroid gland. Aseptic precautions, thanks to the skilful assistance of Mr. Wm. Gonne, were throughout perfect. The neck and laparotomy wounds healed per primam so that after about ninety days junior medical students being unaware, opened the abdomen of the dog.



for other experimental work. The spleen was secured at this time and showed two small omental adhesions, being otherwise normal. Sections of the spleen were made at the Pathological Laboratory and pronounced by Dr. Warthin to be functioning thyroid transplantations. The dog maintained its nutritional equilibrium because as Halsted says, only a small portion of secreting gland is sufficient to supply the body demand. The sections of both pieces of the transplanted portion of the tissue (Figs. 1 and 2) show acini filled with colloid, polygonal cells, which have the granules characteristic of thyroid, with no basement membrane present. There is a suggestion of capsule formation from the young fibroblasts.

## RELATION BETWEEN ACHLOROHYDRIA AND ACHYLIA.

QUINTER O. GILBERT, M.D.

(From the Clinic of Internal Medicine, University Hospital, Ann Arbor, Michigan.)

What I have to say will hardly be dignified enough to be called a paper. I wish merely to bring forth a few facts concerning the physiology of the stomach and a few facts relating to deficiency of the secretion and the methods by which we are now studying those conditions.

The three things of major importance that normally occur in appreciable quantities in the stomach, are the acid and the enzymes, rennin and pepsin. The acid normally in stomachs is considered to be free and combined hydrochloric acid. The quantity of acid present is usually given as 0.2 to 0.25 per cent. hydrochloric acid. Strictly speaking that is not so. The acid content of the gastric juice is much higher than that figure. If we get pure gastric juice which has been obtained chiefly in dogs with the Pawlow pouches, as has been done by Pawlow, Foster and Lambert, Carlson and others, we find that the percentage is higher. Carlson's work has the advantage in that most of his experiments were done on human subjects. He worked with two men who had gastrotomies performed and he was able to make some 300 observations on these two individuals both as to the composition of the gastric secretion and some of the other factors of gastric physiology. In the dog experiments, and in the observations of Carlson, the gastric juice acidity instead of being .2 per cent. is more nearly 0.5 per cent. The reason that acid, as we titrate it in the laboratory, is lower than

that figure is due to two or three factors. The material we recover for examination is not pure gastric juice. We have the addition of saliva, changes of food in the stomach, dilution of fluids and by far the largest factor is the regurgitation of alkaline material from the duodenum back into the stomach. It is believed that the acidity of the stomach is never greater than the normal acidity that glands are able to secrete. There is some individual variation in this. Then the conditions wherein we get hyperacidity are really due to changes in the factors which tend to reduce the acidity rather than an increased secretion of hydrochloric acid, although in certain ulcerative conditions there may be a hypersecretion.

The other two things which we are concerned with are pepsin and rennin, more especially pepsin which is present as pepsinogen. True pepsin is capable of acting upon acid proteins. Therefore, by the action of pepsin we get the first cleavage products of proteins. There is another factor in which hydrochloric acid has been supposed to play a part which should be mentioned here. That is the action of hydrochloric acid in controlling the pyloric sphincter. We know that in conditions where we have no free hydrochloric acid in the stomach, that the stomachs of such patients as a rule empty very rapidly on a test meal. We know, on the other hand, that individuals who have a definite clinical hyperacidity have a moderate retention when there is no other pathology which we can demonstrate except the increased acidity. Cannon thought that he was able to demonstrate conclusively that hydrochloric acid by a delicate balanced mechanism regulated the pyloric sphincter. The acid on the stomach side stimulates the pylorus to open, while the acid stimulating the duodenal side causes the pylorus to close. When the acid on the duodenal side is neutralized by the secretions from the pancreas and the bile, the contraction is lessened and we have a relaxation from the duodenal side and stimulation from the gastric side and the pylorus opens. There are a great many physiologists who now believe that this is not by any means the whole story and that the regulatory mechanism is largely a nervous one.

By achlorohydria we mean a total absence of free hydrochloric acid in the stomach. There may be some combined hydrochloric acid or organic acids. By achylia is meant a total absence of free hydrochloric acid in the stomach.

There may be some combined hydrochloric acid or organic acids. By achylia is meant a total absence not only of free hydrochloric acid but also of the active enzymes, pepsin and rennin. In the routine examination of stomachs with hypermotility with the regular stomach pump, it is almost impossible to recover small residues. For this purpose in these cases we are using a small tube which we use in the fractional determinations of stomach contents. It is impossible to obtain definite data of the pepsin or of the curve of hydrochloric acid secretion unless one examines the contents of the stomach at various periods during the digestive cycle. A number of years ago men attempted this by giving a test meal, say at 8 o'clock in the morning. Fifteen minutes later the contents were recovered and tested. The next morning a similar meal would be given, the stomach evacuated thirty minutes subsequent to ingestion, and a longer period was taken on subsequent mornings. From this a curve of secretion was plotted. There is another method, the so-called fractional method which has received considerable stimulus from workers in Philadelphia. The method is to insert a Rehfus tube having a small tip containing slots on the end which the patient swallows. This being heavy, seeks the dependent portion of the stomach and one can with a syringe draw out a small quantity of the gastric contents and examine it for the three essential constituents, and then at suitable periods obtain other fractions. A similar tube is used for the duodenal contents. We have used a tube of white rubber with a piece of lead placed in the end to give it weight, and like it better than either of the above described tubes. This tube is larger and stiffer than the others and can be easily inserted and is not too large to cause the patient discomfort.

In achlorohydria or achylia, we are concerned largely in several groups of patients, *first* those associated with chronic gastritis. And there is quite a distinctive group of individuals who have this condition. Very many chronic alcoholics fall into this class. In this group common in the Medical Clinic are the railroad employees who have been in the habit of eating cold snacks on the run with no regularity. A second group is associated with malignant changes in the stomach, another large group of cases with a deficiency in secretion are secondary to cardiac and renal diseases. Then again there is a class with purely nervous, psychic achlorohydria and achylia. The group in which we are most interested are those who

have a lack of secretion in severe anemias. We have started now a routine examination of all the patients who have a hypoacidity or achlorohydria, making complete charts on two successive days by examining with the fractional method. We have made thirteen or fourteen charts of patients with achlorohydria and in most of these where we have found achlorohydria, there would also be no pepsin present. The point of interest to us is, have these patients enough secretory tissue left in the stomach which under proper circumstances would secrete enough pepsin to perform the ordinary processes of digestion? Ordinarily it takes a small amount of pepsin if it is activated to digest an ordinary meal. Normally there is pepsin in excess in the stomach.

I wish to demonstrate several curves of secretion which we have charted. The first curve is from a man who has a true achylia gastrica. The free acid curve remains absolutely zero. During this time there was no pepsin present and the total acidity varied from 10 cc. of  $n/10$  acid per 100 cc. of contents or one-sixth to one-seventh normal acidity up to 18 or 19, and remained level to the end.

The parallel curves were made after administering acid. The therapeutic dose of hydrochloric acid which we give ordinarily is 30 minims with the meal, a similar dose administered after the meal, and that is usually considered a good sized dose. In this case at the beginning of the experiment we gave 30 minims of dilute hydrochloric acid and one-half hour after the meal again a second 30 drops. With this dosage the free acid curve remained almost level, at about zero. The combined level went up to 40 and the pepsin curve remained zero except at the time where the total acidity went up to 40, there was one unit of pepsin whereas the normal individual has 200 to 250 units.

On the third day we gave the man the same meal and 30 drops of dilute acid. At twenty minutes we drew off a portion of the contents for examination. At that time free hydrochloric acid was zero, and combined 15. After withdrawing the fluid we injected five drops of concentrated hydrochloric acid in 10 cubic centimeters of water and twenty minutes later withdrew another sample, and repeated the strong acid. This was repeated until the stomach was empty. After we injected five drops of concentrated acid ten times during two hours and thirty minutes, the free hydrochloric acid curve went up at one time to a high normal



free hydrochloric acid. The lower curve represents the curve of pepsin secretion. There was no pepsin during the psychic secretory period, and an appreciable amount during the second hour.

The second is the curve taken from a pernicious anemia case. His first curve is not unlike the one from the first patient. With the therapeutic doses given there was a slight rise in the combined acid, although the free acid remained zero and there was no pepsin activity. He was given nine injections of the five drops of hydrochloric acid and his free curve went up as high as 36 and his total went up to about 50 at one point. Pepsin remained negative throughout.

#### DISCUSSION.

DR. JAMES G. VAN ZWALUWENBURG: This is all very interesting, and from the point of view of the relationship of the gastric and duodenal secretions, it is very much to the point. However, from my point of view, there is another element in the control of gastric secretion and in the control of the pyloric reflex which is not mentioned, namely, the so-called "ileocecal pyloric reflex." Of course, the principle that the discharge from the stomach is more or less controlled through nervous mechanism from the terminal ileum is hypothetical, but to the X-ray man it has come to be a very real thing. We see clinical evidence of that almost every day and it offers a fairly satisfactory explanation as to why we should have a hyperchlorohydrria in appendicitis, for instance. We know that irritation about the appendiceal region will cause a true pyloric spasm. I have seen a pylorus at operation swell and blanch in contraction even with the patient etherized, when the whole trouble was with the appendix. If we have a pyloric spasm in appendicitis which prevents the regurgitation of the alkaline duodenal contents, it seems very natural that the hydrochloric acid content of the stomach should rise. It would seem that this mechanism must be taken into account. As a matter of fact, I think it is so taken into account in much of the work that is being done. Only the other day I read a report of some work along this line in which the investigator used, not the normal human animal, but dogs and took the precaution to eliminate this particular reflex by section of the cord. Until we get some experiments along those lines our results are going to show the effect of a large number of complicating factors which will be exceedingly difficult to unravel.

DR. WILLIAM R. VIS: The belief seems to be growing that the pyloric reflex is not controlled very much by the relative acid content of the stomach. In a very recent number of *The American Journal of Physiology*, Morse quotes the results of experiments done on animals as Dr. Van Zwaluwenburg suggested. They also used different solutions

that were introduced into the stomach with the question in mind that we are discussing here and from their results it seemed that it did not make any difference regarding the opening of the pylorus whether water or saline solutions or acidulated solutions were used. In Starling's latest book on physiology very little emphasis is laid on the relation of acid to the pyloric reflex. The pylorus is probably influenced by nervous mechanism which centers in the duodenal wall as well as in the prepyloric region.

DR. THEOPHIL KLINGMANN: I would like to ask Dr. Gilbert why he suggested that this method of administering large therapeutic doses of acid could not be carried out in practice.

DR. GILBERT: In reply to Dr. Klingmann's question, I think it would be impractical to give such large doses of concentrated acid as it would be necessary to use a tube.

The two points which Dr. Van Zwaluwenburg and Dr. Vis brought out, I had hoped that I had suggested in the work that had been done in Carlson's observations in the two patients with gastrostomies. In those cases where we have the reflex action causing the pylorus to contract, we have instead of a hyperacidity a secretion more nearly the concentration of the normal gastric secretion.

In Howell's new edition you find practically nothing about the acid controlling the pyloric sphincter.

In addition we might say that there was practically no delay in emptying the stomach from giving the acid, more than about twenty or thirty minutes, which might be a daily variation.

#### A REVIEW OF CERTAIN PELVIC CASES SHOWING THE VALUE OF VAGINAL ASPIRATION AS A DIFFERENTIAL DIAGNOSTIC PROCEDURE.

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The purpose of this paper is to call attention to the diagnostic value of vaginal aspiration in certain pelvic conditions. There are many cases in which we have a definite mass in the pelvis in the mid line, or to one side associated with pain in the lower abdomen, and fever. The history in these cases is often misleading, and since the surgical procedure depends upon the exact nature of this mass any means which will aid us in arriving at an accurate diagnosis must be most welcome.

Typical cases of acute pelvic inflammatory disease with purulent exudate offer little difficulty in diagnosis, and the same is true of a typical case of ectopic pregnancy. But many

of the cases with which we have to deal are atypical, and certain valuable symptoms and signs are missing. It is in these cases that vaginal aspiration is of most value. In ectopic pregnancy, the menstrual disturbance may be so slight as to pass unnoticed, and there may be a history of continued pain in the side, with moderate fever and leucocytosis. Likewise in pyosalpinx we may get a history of a sudden sharp pain in the side with a moderate irregular fever. There may be some menstrual irregularity, and this with the presence of a soft mass in the region of the appendages might lead us to a diagnosis of extrauterine pregnancy. An old pelvic abscess, with a dense wall may even be mistaken for a fibroid, or an ovarian cyst. In such a case laparotomy might be attempted, as in one of the cases cited below. Furthermore, many cases of ectopic pregnancy occur in women with gonorrhea, or other inflammatory condition in the tubes, and we may have both extrauterine pregnancy and pyosalpinx in the same case. In such a case, even with a clean cut history of an ectopic, aspiration is especially indicated. The presence of pus, mixed with the blood, is a contraindication to abdominal section, and in these cases colpotomy is the operation of choice.

The danger of mistaken diagnosis is evident. Although pelvic abscesses are most frequently of gonorrheal origin and sterile, yet a certain proportion of them contain active pyogenic organisms, and contamination of healthy peritoneum will sometimes result in general peritonitis. A number of years ago it was the custom to treat purulent collections in the pelvis by abdominal section, and extirpation of the abscess sac together with the pelvic organs. This is extremely dangerous, and needlessly radical. The rational treatment of pelvic abscess is not laparotomy, even if there is no danger of peritonitis, but vaginal puncture and drainage. This is safe and conservative because it gives nature the chance to restore the pelvic organs to their normal functioning condition. If symptoms persist the diseased organs may be removed when the abscess is healed.

In such cases it has been the practice in the Gynecological Clinic to employ the aspirating syringe as a final diagnostic procedure. The cervix is brought down with a volsellum for-

ceps, and the needle inserted posterior to one side or the other, as the case may be. The mass is aspirated and the contents of the syringe noted.

Although the presence of blood does not always mean ectopic, yet this is true in such a large proportion of cases that in the presence of a suggestive history, laparotomy is indicated. The presence of pus in the aspirating syringe of course indicates colpotomy and tube drainage. The added security of such a procedure is apparent.

Vaginal aspiration is comparatively harmless. It is done only in those cases in which there is a definite cystic mass in the pelvis with a suggestive history of inflammation. If the collection of fluid is pyosalpinx the tube is enlarged and prolapsed into the cul-de-sac. If there is a collection of pus in the parametrial connective tissue the cul-de-sac is filled with a retroperitoneal abscess. In case of ruptured ectopic there is either a collection of blood in the broad ligament, and consequent displacement of the intestine, or there is a large mass of blood in the peritoneal cavity which gravitates into the pelvis. In any case the gut is lifted out of the pelvis by the exudate, and there is but little danger of puncturing it.

Should the intestines be adherent to the pelvic organs and be punctured by the aspirating needle little harm will be done. The hole will be quite small, and will contract down quickly when the needle is withdrawn, and but a minimum amount of infectious material will escape. Even if some of this should soil the pelvic peritoneum there is but slight danger of general peritonitis since the pelvic peritoneum is much more resistant to infection than that of the rest of the abdominal cavity.

This is in marked contrast to abdominal aspiration of tumor masses. Here the aspirating needle must of necessity pass through two layers of peritoneum. In large tumors, such as ovarian cysts, there is but little danger of puncturing the gut, but the fluid is under so much tension that even a small puncture hole will allow it to escape. Should this be infected, as is the fluid in many large cysts, there is great danger of general peritonitis because the peritoneum in this locality is not nearly so resistant to infection as the pelvic peritoneum. The danger of this procedure was conclusively



shown by Dr. Peterson in a case reported a number of years ago. An ovarian cyst was aspirated through the abdomen with a very fine needle under aseptic conditions. At operation a few days later a quart of free fluid which had escaped from the needle puncture was found in the abdominal cavity. In this case, however, the fluid was aseptic, and the patient made an uneventful recovery.

Despite the value of vaginal aspiration for diagnosis in these doubtful cases, the textbooks make but scant mention of it. Kelly, in his book on Operative Gynecology, mentions colpotomy as one form of treatment in old cases of ectopic pregnancy where there is little danger of recurring hemorrhage, but makes no mention of aspiration of the mass for diagnostic purposes. In Kelly and Noble's Gynecology and Abdominal Surgery, aspiration is advocated in doubtful cases. However, but little stress is laid upon this point. Crossen, Graves, and Montgomery advise laparotomy in ectopic, and colpotomy in pelvic abscess, but make no mention of aspiration as a means of determining which condition is present.

The following recent cases are quoted from the records of the Gynecological Clinic as illustrative of this point.

CASE 1. Mrs. F. M., age 24, entered the Hospital April 18, 1916, complaining of pain in the left side. The past history was negative except for a stillbirth in May, 1915. The labor was normal but the placenta was removed manually. There was no history of sepsis following the labor, but she never entirely recovered her strength. For the past six months she had had an occasional pain in the lower abdomen. This pain had been getting worse, and was localized in the left side. She had had no definite chills nor fever, but had lost considerable weight and strength. Her periods had been normal, except that since her last period in March she had had a slight blood tinged discharge. Examination revealed a poorly nourished girl, very weak, and anemic. There was a tender mass in the region of the left appendage, and a tentative diagnosis of pelvic inflammatory disease was made. Ectopic pregnancy was considered, but the findings were not thought to be conclusive. The patient was observed for a week, and at no time did her

temperature rise above 99.4 degrees. Vaginal aspiration showed old blood, conclusively proving that the mass was ectopic. Laparotomy was performed and a left sided ectopic, with rupture in the peritoneal cavity was found and removed.

CASE 2. Mrs. C. W. age 42, entered the Hospital January 5, 1917, complaining of pain in the left side. She had been pregnant four times, having two living children, and a history of two miscarriages at the third month. The last pregnancy was seven years ago. Since last November she had had three severe attacks of pain in the left side associated with fever, each one lasting several days. There were no signs of hemorrhage with these attacks. She menstruated steadily for three weeks in November, since when she had had no regular period. She had, however, a slight show of blood on several occasions. Examination revealed a mass on the left side of the uterus, displacing it somewhat and extending half way to the umbilicus. Her temperature before operation varied from normal to 101 degrees. Aspiration showed a thin purulent fluid, and posterior colpotomy was done, liberating a large amount of foul pus. A rubber drainage tube was inserted and the patient made a good recovery.

CASE 3. Miss S., age 27, colored, entered the Hospital November 20, 1916, as an emergency, complaining of pain and tenderness in the right side. She had been repeatedly exposed to pregnancy. She flowed normally in September and scantily in October. Since November 4th, she had flowed continuously, but had never passed any clots or pieces of flesh. The pain in the right side had been gradually growing worse. There was no history of hemorrhage, although her hemoglobin was only 65 per cent. by the Miescher method. Examination revealed a mass on the right side reaching almost to the umbilicus and the uterus was displaced somewhat to the left. Her temperature was 100.4° the evening preceding the operation. Vaginal aspiration showed dark fluid blood. Laparotomy was performed and a right sided ectopic removed, together with a large amount of old blood. The patient made an uneventful recovery, and was discharged two weeks after operation.

CASE 4. Mrs. M., age 40, entered the Hospital April 26, 1916, complaining of pain in

the left side, irregular menstruation, and backache. Her last normal period was December 20, 1915. In January and February she flowed scantily, and not at all in March. On April 6th, she was seized with a sudden sharp pain in the abdomen, and felt faint. The pain was present at intervals for three weeks, becoming more marked the week previous to entrance to the Hospital. She had been flowing slightly for the past two days. At no time had there been any definite history of fever, and her temperature was normal on entrance. Examination revealed a very tender, cystic mass on the left, about the size of an orange. A definite diagnosis of ectopic was made. Aspiration revealed nothing but a clear cystic fluid, but since there was no pus in the pelvis, an incision was made and a left ovarian cyst the size of an orange was removed, together with the ectopic mass which had ruptured into the peritoneal cavity.

CASE 5. Mrs. C., age 28, entered the Hospital January 26, 1916, complaining of a tumor in the lower abdomen. She was operated in September, 1916, when an attempt was made to remove the tumor. The attempt was unsuccessful, and two weeks afterward the lower pole of the wound began to discharge and this had continued ever since while the tumor had grown more rapidly. She had had no fever and no pain during this time. Her last period was in August and there had been no show since. Examination revealed a hard, non-cystic mass filling the left side of the pelvis. A small fibroid nodule was felt on the anterior surface of the uterus. Vaginal aspiration revealed the presence of pus, and the entire mass collapsed after colpotomy. The patient made a good recovery, and although the abdominal sinus had not quite healed on discharge, yet it had stopped draining.

In each of these cases vaginal aspiration gave us very valuable information. In Cases 1 and 3 it conclusively demonstrated the presence of extrauterine pregnancy. In Case 4, although the ectopic mass was not reached by the aspiring needle the presence of clear cystic fluid ruled out pelvic abscess, and the typical history of ectopic made it perfectly safe to make an incision. In the fifth case, laparotomy had actually been performed on an old pelvic abscess under the supposition that it was an ovarian

cyst. The result of this inaccurate diagnosis was that the patient was left with the discharging sinus.

The result of a more general application of this diagnostic procedure will be that the indications for colpotomy and abdominal section will be more definitely determined. As a consequence, we will have fewer cases of peritonitis and persistent abdominal sinuses.

The conclusions which we may draw from the consideration of this subject are as follows:

1. That it is impossible to differentiate clinically between atypical cases of ectopic gestation, and purulent collections in the pelvis.
2. Typical cases of ectopic may be combined with pyosalpinx.
3. In case of a mistaken diagnosis, laparotomy in the presence of pus, is a dangerous and unnecessarily radical procedure.
4. Vaginal aspiration is comparatively harmless, and may be employed in the routine ether examination without materially prolonging the operation.
5. Abdominal aspiration is not safe.
6. Although blood in the pelvis does not always mean extrauterine pregnancy, nevertheless laparotomy is justifiable in the presence of such findings.

#### DISCUSSION.

DR. REUBEN PETERSON: I don't know that I have much to add to Dr. Henderson's excellent paper. I have always felt that vaginal aspiration has been insufficiently emphasized. My mind goes back to about 1890, the beginning of the radical treatment of pus in the pelvis. At that time we were influenced by the teachings of Joseph Price and other radical operators. These men did a great deal for abdominal surgery. Before that time we had been cowardly. At that time I was an interne in a hospital and I saw how these pus tubes and pelvic neoplasms were treated. The common method then was to make a small incision in the culdesac and stick in a drainage tube through the very small incision after evacuating the pus. Then it was the duty of the interne to wash out these cavities. Because of insufficient drainage the smell was horrible and we dreaded this class of cases. They didn't get well. There was a long continued sinus. After a while the drainage tube was removed. The patients were emaciated, very weak, and septic. I remember very well when I was an interne in the Free Hospital For Women at Boston. Price made a visit to the clinic and he was taken around and shown these patients. It wasn't a very good exhibit. He said to the surgeon in charge, "Why don't you open the abdomen and clean out the pelvis?" The surgeon



said, "Why, I never heard of such a thing." Dr. Price said, "If you go to work and open up the abdomens and take out the pus tubes these patients will get well." He went all over the country preaching this doctrine, and we young men who were ambitious to do abdominal surgery followed his teachings for six or eight years. It was considered cowardly not to open the abdomen and remove a pus tube, no matter how large the pus tube or how many technical difficulties there were. We persisted in this method in spite of quite a high mortality. The high mortality could not all be explained by the fact that we were new to abdominal surgery because even after we had had a great many cases a certain proportion of patients died from general peritonitis. The mortality was a great deal higher than the operators were honest enough to acknowledge. I think that it was as high as 10, 15, and perhaps 20 per cent. I remember very well the case that led me to change my practice in the treatment of pus tubes.

I was called to see the daughter of a physician in Grand Haven. She had been septic with a very large pus tube for a number of weeks and her father had been loathe to have her operated upon. She was in such a bad condition that I told him it would be folly to attempt an abdominal operation and the only thing I could do was to open the culdesac and let out the pus, which I did. I said, "Afterwards when she has recovered her health and strength, we can remove the pus tube." That woman never was operated a second time, much to my surprise. She got perfectly well and in less than a year's time it was impossible to tell on which side the pus tube was. Since that time I have treated pus in the pelvis by means of the vaginal incision.

However, what Dr. Henderson has brought out so well will always obtain in pelvic and abdominal work. It is not always so easy to make a diagnosis between pus tube and ectopic pregnancy. It is not always so easy to tell whether you have a fibroid or a large amount of inflammatory tissue in the pelvis. Anyone who says he can always make a diagnosis from the history or physical findings does not sum up the results of his experience. For that reason it has been my custom to use for a number of years the vaginal aspirator because if there be pus in the pelvis, I think I am doing much better for my patient to make an opening from below. There is not much danger, the needle is fine, everything is shut off, and if you do puncture the bowel, which I don't remember of doing, it would not do any harm. We must not forget also that a ruptured ectopic eventually may become purulent and if the mistake is made and the abdomen is opened in such cases it goes very hard with the patient and the mortality is very high. So, looking at it from all aspects, it is a safer procedure to insert a needle

prior to the more extensive opening of the posterior culdesac to drain whatever may be necessary in the pelvis.

I well remember the case which he speaks of where the aspiration was made through the abdomen. We had gone over this case very carefully in the clinic and had made a diagnosis of ovarian cyst, and in order to prove it to the class, I inserted a long needle through the abdominal wall and drew off some fluid. We operated later and found a pint or two of fluid in the abdominal cavity. It is an entirely different matter when the aspiration is made from below.

DR. R. A. BARTHOLOMEW: I was also somewhat interested in looking over the textbooks to find that out of four or five of the better known textbooks on gynecology, there was only one, Kelly and Noble, that made any mention of vaginal aspiration as a means of diagnosis. As Dr. Henderson has said, the necessity for this procedure is found to be greatest in those cases of ectopic which are somewhat atypical and resemble inflammatory cases. Kelly also gave statistics showing the relative mortality in cases where abdominal operation was done and in cases where posterior colpotomy was done, the former having a mortality of about 27 per cent. and the latter about 2 per cent.

The behavior of the tube when it begins to distend with pus or blood is rather typical in most cases. Apparently the weight of the ovary and the posterior traction of the infundibulo-pelvic ligament tends to pull the tube over in the posterior direction, and as it further distends, it comes to lie against the vault of the vagina where it is very accessible to the needle and in such cases the diagnosis can be made without danger of injuring the intestine or ureter.

DR. R. W. KRAFT: I would like to ask Dr. Peterson a question. As I understand it, in 1890 these patients who were drained were cachectic. What difference is there in the drainage now in order to insure a good recovery at this time when at that time they remained septic. How does the operation of the present day differ from the operation of 1890?

DR. PETERSON: There was a medical incision made in those days just long enough to introduce a small drainage tube. There were no apartments of the pus tube broken up so that you used to have a number of cavities and only one of them drained. In the modern operation of colpotomy an incision is made from one side of the pelvis to the other and the finger introduced along the posterior wall of the uterus. All of these cavities are broken up so that you get good drainage. Then having such a large surface to drain through, you don't get the retention of pus you used to in the old days.

AFTER HISTORY OF A PATIENT WITH  
INOPERABLE VESICOVAGINAL FIS-  
TULA WHERE THE RECTAL  
WAS SUBSTITUTED FOR THE  
VESICAL SPHINCTER.

REUBEN PETERSON, M.D.

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pital, Ann Arbor, Michigan.)

I desire to place on record the after-history of a patient whose case I reported rather recently before this Society. It was the case of a woman who had had her bladder and the upper part of the vagina torn all to pieces by the unskillful application of the obstetric forceps. There were so many adhesions in the upper part of the vagina that it was impossible to locate either the cervix or the external os. After attempting to close the fistula and failing because of the condition of the parts, an opening was made in the rectum and the vagina closed.

The patient made a good recovery, being able to retain the urine for some hours through the action of the rectal sphincter. Naturally it was thought that the menstruation would have to be stopped by some method to prevent the retention of the menstrual blood within the uterus. However, just before she left the Hospital she began to menstruate through the rectum and we allowed the patient to go home after warning her that she might have to return in case of subsequent trouble with the menstrual function.

Subsequently she wrote me that she was much improved in health and that she would consider herself perfectly well except for terrific cramping pains just prior to the menstrual flow. These pains she described as something fearful until they were relieved by the appearance of the menstrual blood in the urine passing by way of the anus. The cause of the pains was perfectly apparent. They were due to efforts on the part of the uterus to force the menstrual blood through an os buried in cicatricial tissue. When once the obstruction was overcome and the flow established, the patient was relieved.

After the patient re-entered the Hospital various methods of relieving her were considered.

It seemed useless to attempt to find the external os through the rectovaginal opening since such an attempt had failed when access to the upper part of the vagina had been had through the introitus aided by sight as well.

The choice then lay between stopping the menstruation by means of the X-ray or removal of the ovaries. The patient objected to the former method on the ground that she might have to remain in the Hospital too long. She preferred removal of the ovaries which she claimed were of no use to her since she could never have any more children and since even sexual intercourse was impossible. So the ovaries were removed through an abdominal incision yesterday with the expectation that menstruation will cease and a cure will result.

It is not claimed that the series of operations on this patient constitutes ideal surgery. It is only applicable to the unusual case of bladder fistula, since in nearly all cases the opening can be closed by one or more operations. However, where that is impossible because of the loss of the bladder sphincter or for other reasons, I claim it is a procedure which can be counted on to give great relief to the patient. I showed this patient in the Gynecologic Clinic yesterday and she expressed herself as being very happy over her present condition when compared with the sufferings she underwent when her vulva and thighs were continually wet with the dribbling urine. She stated that if she could be relieved of the recurring menstrual pain she would be perfectly contented.

In looking up the literature of such operations I find that quite a large percentage of the patients ceased to menstruate after the rectum was opened and the vagina closed. It is rather difficult to explain why menstruation ceased since the ovaries were not removed, nor was there anything about the operative technic to cause cessation of the ovarian function. Where menstruation continued after the operation, no untoward results, such as infection of the uterus, resulted. This lack of uterine infection, as well as the absence of renal infection, would tend to show that very few colon bacilli found their way into the vagina through the rectal opening.



The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman .....Owosso

Guy L. Kiefer .....Detroit

W. J. Kay .....Lapeer

W. J. DuBois .....Grand Rapids

EDITOR

FREDERICK C. WARNSEHUIS, M.D., F.A.C.S.

Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

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May

Editorials

WHAT THE PROFESSION OF MICHIGAN MUST DO TO RESPOND TO THE COUNTRY'S CALL.

The medical quota for Michigan to be called to active service at the front is six hundred. I am asked to write an editorial for the *Journal* on, "What the Profession of Michigan must do to respond to the Country's call."

Briefly—*It must furnish this quota.* That it will do so and promptly, there is no manner of doubt. And the quota will be of the choicest character. Of this there can be no question. Michigan's medical standards are high and the personnel of the profession is excellent. Those called to the front will acquit themselves with honor and distinction. God speed them on their benevolent mission and accord them safe return to their homes and firesides.

What are the "stay-at-homes" to do? Some of the ineligible would enlist but they may not break down the portals of the recruiting office, and demand as did the octogenarian Anatole France to go to the firing line. Most of them lack the audacity and sublime courage to compel reluctant consent to such a demand. They must content themselves with the activities related to civilian practice, the base

hospital and the Red Cross. Certain important trusts will be committed to their hands which they must exercise with vigilance and determination that the square deal shall prevail.

First: There should be appointed by every County Medical Society a committee composed of its most conscientious members who will direct their energies to the conservation of the local practice of the men at the front. Those at the front may communicate to this committee their wishes in regard to temporary medical and surgical charge of former patients. An *entente* thus established would, it is hoped result in the maintenance of their professional standing and the continuation of personal dependence on the part of their patients. These should be led to feel that absence is but temporary and every effort should be made to keep alive the spirit of allegiance and the memories of previous service. Hospital and other appointments should be accepted as *interim* only—the new incumbent making plain that he is acting in the place of the patriotic absentee.

Second: A committee of the County Medical Society should assure itself by personal visitation that the physicians' families or dependents lack nothing. A fund should be at once provided, placed in the bank, disbursable on the Secretary's check and augmented by monthly assessments upon Society members and voluntary contributions, to fulfill every probable need in succoring those left without adequate means of support.

Third: There should be created in every County Society a fund similar to the P. S. D. for the purchase of supplies in emergency for those at the front. They should be assured of occasional luxuries and never lack the necessities unobtainable because of all too meagre salaries. Reasonable requisitions upon this fund should be promptly honored that no military medical activities may be hampered by lack of nourishment or failure of equipment.

Fourth: Mobilization of nursing forces, Red Cross and home guard duties are other outlets for professional effort and it may well be that treasonable and disloyal disposition in any community may be checked or thwarted through revelations on the part of the physician. He is accustomed to observe and quick

to analyze and act. His training has created this habit of mind. It should be a useful and dependable agency in the Secret Service.

I offer the motto: *"Co-operation with the worker at the front. Protection of his interest at home."*

C. B. BURR.

### THE NATION'S CALL AND THE NATION'S NEEDS.

Hard as it is to realize it, yet war is upon us and with the most efficiently organized military power of Europe. Congress must provide an enormous army to meet this Country's needs and towards those needs the Medical Profession must supply its quota. To meet them; to select physicians for the medical Section of the Officers' Reserve Corps, for the Guards, for the Navy and for the large army to be created and organized; to see that men are selected for their ability and efficiency in certain directions; to protect the practice of these medical officers during their absence; and to make provision for their families, the Michigan State Medical Society is called into extraordinary session at Battle Creek at 10 a. m., on Thursday, May 10, 1917.

The Medical Service of the Army in times of peace, efficient as it is, can never be recruited to its war strength. It can serve only as a nucleus of the necessarily larger body. At the time of the Spanish-American war the additional medical officers required were taken from civil life and given contracts to serve and were known as Contract Surgeons, an anomalous position, unsatisfactory both to the Government and to the medical officer. He held the minimum grade, was given no promotion and was entitled to no pension, if injured or disabled. He could be discharged at will by the Government. But within the last eight years legislation favorable to the development and the efficiency of the service has been enacted. In 1908 the Medical Reserve Corps of the Army was created and this has brought to the service of the Army many eminent physicians from civil life. On June 3, 1917, this corps will be known as the Medical Section of the Officers' Reserve Corps, and will be "a body of medical men who have accepted commission from the President in order that in time of peace they

may, insofar as it is possible, prepare themselves for service in war." Their commission reads for five years and when in active service they are a part of the Army, subject to its orders and its discipline. It is estimated that no less than seven medical officers to every 1,000 men is needed, which means for an army of 1,000,000 men 7,000 to 10,000 Medical Officers. Besides this, thousands of physicians and surgeons will be needed for the Red Cross service, which in time of war is under the supervision of the War Department, though financed by private funds. I understand that those serving with these units will be members of the Medical Section of the Officers' Reserve Corps detailed for this work.

The service of all of us will be needed; those up to 45 years of age for active field work; those between 45 and 55 years for special work in base and governmental hospitals; and those above 55 years for selective work. Those disqualified by physical disability and those unable to serve because of great home responsibilities will have plenty to do to look after the interest of those in the service.

In this spirit of patriotic duty and of mutual helpfulness let us meet together, ever mindful that the medical profession has never been found wanting in a national crisis.

ANDREW P. BIDDLE.

### OUR PATRIOTIC DUTY.

The time for argumentative debate is past. The discussion of "why's," "ifs" and "if we only had's" is no longer pertinent. The hour has struck, our Country has declared its position, we have enunciated our attitude and purposes—we are at war. Our President calls upon us to respond to the defense of our flag and those principles and privileges which are vouchsafed to those who pledge to it their allegiance. It now rests with each individual as to how and in what manner he will respond to this call and what his individual contribution will be to his country in this hour of mobilization.

As members of the Medical Profession of Michigan a responsibility is placed upon us. We are called upon to provide SIX HUNDRED PHYSICIANS AND SURGEONS for active field duty. One quarter of our membership



or one-fifth of the total number of the profession of this state is needed NOW to serve in the Medical Departments of our Army and Navy. What are you going to do, Doctor, to fill this quota that is called?

We are mindful of all that is entailed by stepping forth and proffering one's service. We realize most fully what ties must be put aside, what hopes must be postponed. We appreciate the plans that will be disrupted, the personal sacrifices that will be occasioned. And still over and above all these personal affairs, ambitions, pleasures, hopes, desires, there clearly stands out the call—"Michigan SIX HUNDRED DOCTORS TO SERVE OUR FLAG." No, we will not falter or waver even. Loud and clear will be, MUST BE, our reply: "WE ARE COMING."

Doctor, ere the echo of our answer fades away, will you not cause to be placed in Dr. Reuben Peterson's hands the enrollment of names from your county to fulfill this quota? Doctor Peterson is Chairman of the State Committee that is pledged to present to the War Department six hundred doctors from Michigan.

Quickened by the examples of the past, instructed by its experience, warned by its voices, assisted by its accumulated instrumentalities, may we reproduce today in life that spirit that inspired our Michigan doctors to respond to their Country's Call in the years that have gone. May we emulate their labors and partake of their immortality. Your duty is clear; may your response be prompt.

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#### DELEGATES' CREDENTIALS.

Owing to shortness of time and because lists of County delegates are not complete, County Secretaries are requested to supply each delegate with a letter certifying to his election as a delegate. Delegates will present these letters at the opening of the House of Delegates.

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#### PLACE OF MEETING.

The Special Session will be called to order in the Masonic Temple, Battle Creek, at 10:00 A. M., May 10th, 1917.

#### SPECIAL MEETING—THE OFFICIAL CALL.

Recognizing the tremendous responsibility which rests upon the medical profession of Michigan by our Country's entrance into the world's war and responding to the President's call to defend the commendable principles enunciated in his message to Congress, it has been deemed wise and imperative that our State Society convene in extraordinary session. The deliberations of the extraordinary session will be devoted to the presentation of our responsibilities, the discussion of measures of preparedness, enlistment, Red Cross, hospital and relief work and such other features as may coincidentally present themselves.

Therefore, as President of the Michigan State Medical Society and by virtue of the authority vested in me, I do hereby announce and declare that our State Society will convene in **SPECIAL SESSION IN BATTLE CREEK, CALHOUN COUNTY, AT 10:00 A. M., ON THE MORNING OF MAY 10, 1917.**

The Component County Societies are requested to send their official delegates and to urge the attendance of every member.

Andrew P. Biddle, President.

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#### SPECIAL MEETING—THE COUNCIL

The Council of the Michigan State Medical Society will convene in **SPECIAL SESSION AT 8 P. M. on May 9, 1917, in Battle Creek.** The deliberation of this body will be devoted to the problems that are presented or to be presented during the special meeting of the State Society on May 10, 1917.

W. T. Dodge, Chairman.

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#### OUR OBLIGATION.

The plan to call an extraordinary session of the Michigan State Medical Society for May 10th next is to be commended. It will furnish an opportunity for the Michigan medical profession to demonstrate to the President that his appeal to the American people to enlist in "a great national, a great service army" will

be responded to by the physicians of this State. Doctors as a class abhor war. It is repugnant to them, not only because they know only too well from their daily experience what suffering from violence and disease really means, but because it is instinctive to the profession to save and not destroy. But the time has passed when we can argue for or against war. It is here and we must do our part toward carrying it to a successful issue.

How can we as a profession do our bit? Who are to go and who are to stay? What are our duties toward our country and toward our families? These and other equally important questions must be answered by us individually and collectively. Hence, it is well in these times to have a special session of our State Society that we may hold counsel.

It has been my lot during the past few months to discuss with many physicians in the state the questions that are so agitating us now. Some were ready and eager to go at the first call. Others were willing to go if they had to go. But no matter how the question was answered I have yet to find one doctor of military age who said he would not sacrifice every thing and serve his country if the need were great.

After all it comes down to that fundamental question, "Am I greatly needed or is this another border mobilization? If it is, I do not care to leave my practice for field duties which do not particularly interest me." The answer seems plain. This is no border scrimmage. It is a serious crisis, undoubtedly the greatest national crisis since the Civil War. We are going to win or help win the struggle but only at the greatest sacrifice. Who is there among us who has the temerity to predict when the war will end? Certainly not the medical profession whose entire training tends toward cautious prognosis. There has been talk of an army of two millions. Who has the supreme confidence to look into the future, after witnessing what has taken place in Europe during the past two and a half years, and deny the possibility that we may have to raise an army of twice that size before we are through with this affair? Let us not forget what happened in the Civil War. Ninety day enlistments and the war was to be over; and it took four years.

Yes, the crisis is here. The country needs physicians in its Medical Officers' Reserve Corps and wants them now. If we wait six months or a year before offering our services, remember it will be six months after that be-

fore we will be worth a great deal from a military standpoint, we civilian doctors unaccustomed to discipline and ignorant, the great mass of us, in matters absolutely essential to a perfectly organized medical corps.

That those in authority think that many of us will be needed is shown by the efforts of the Council of National Defense to organize the profession throughout the country. Committees for medical preparedness have been appointed in each state. In turn auxiliary medical defense committees have been appointed in the several counties of each state. The duties of these committees are to gain needful information regarding the civilian medical resources of their own communities and to provide the machinery whereby applicants can be secured for the various army and navy medical services.

The Michigan profession has most loyally responded to the call for organization as may be seen by the personnel of the state and county committees appended below.

The machinery is now complete. Every qualified physician in the state will be seen or written to by his county committee and given an opportunity to become an applicant for the Medical Officers' Reserve Corps. At the lowest estimate Michigan will be expected to furnish 500 doctors for the service. Are you planning to be one of these? If so get into communication with your county chairman at once.

REUBEN PETERSON.

#### MICHIGAN STATE COMMITTEE FOR MEDICAL PREPAREDNESS.

Reuben Peterson, Chairman, Ann Arbor.  
Max Ballin, 357 Woodward Ave., Detroit.  
Andrew P. Biddle, David Whitney Building, Detroit.  
James T. Case, Battle Creek.  
C. B. G. de Nancrède, Ann Arbor.  
J. G. R. Manwaring, Dryden Bldg, Flint.  
Walter R. Parker, David Whitney Bldg., Detroit.  
Richard R. Smith, Metz Bldg., Grand Rapids.  
Victor C. Vaughan, Ann Arbor.  
F. C. Warnshuis, Powers Theatre Bldg., Grand Rapids.

#### CHAIRMEN AUXILIARY MEDICAL DEFENSE COMMITTEE.

Allegan County—Arthur L. Robinson, Allegan.  
Alpena, Alcona, Montmorency Counties—Clarence M. Williams, Alpena.  
Antrim, Charlevoix, Emmett Counties—Frank W. Witter, Petoskey.



Barry County—John W. Rigterink, Freeport.  
Bay, Arenac, Iosco Counties—Virgil Tupper, Bay City.

Berrien County—David Littlejohn, Bridgman.

Branch County—Bert W. Culver, Coldwater.

Calhoun County—James T. Case, Battle Creek.

Cass County—William C. McCutcheon, Cassopolis.

Cheboygan County—Willis E. Chapman, Cheboygan.

Chippewa, Luce, Mackinac Counties—Emil H. Webster, Sault Ste. Marie.

Clare, Isabella Counties—James F. Adams, Mount Pleasant.

Clinton County—Walter A. Scott, St. Johns.

Delta County—Arthur J. Carlson, Escanaba.

Dickinson, Iron Counties—S. Edwin Cruse, Iron Mountain.

Eaton County—Francis R. Blanchard, Eaton Rapids.

Genesee County—E. C. Rumer, Flint, Smith Building.

Gogebic County—Axel A. Anderson, Ironwood.

Grand Traverse, Benzie, Leelanau Counties—F. Holdsworth, Traverse City.

Gratiot County—Cyrus B. Gardner, Alma.

Hillsdale County—Walter H. Sawyer, Hillsdale.

Houghton, Baraga, Keweenaw Counties—W. K. West, Trimountain.

Huron County—Charles B. Morden, Bad Axe.

Ingham County—Harry A. Haze, Lansing, 123½ Washington Ave.

Ionia County—Joseph F. Pinkham, Belding.

Jackson County—C. G. Parnall, Jackson.

Kalamazoo County—A. W. Crane, Kalamazoo.

Kent County—Richard R. Smith, Grand Rapids.

Lapeer County—William J. Kay, Lapeer.

Lenawee County—A. W. Chase, Adrian.

Livingston County—John W. Toan, Howell.

Macomb County—Joseph M. Croman, Mont Clemens.

Manistee County—Homer A. Ramsdell, Manistee.

Marquette, Alger Counties—A. W. Hornbogen, Marquette.

Mason County—Ephraim G. Gray, Ludington.

Mecosta County—William T. Dodge, Big Rapids.

Menominee County—Walker R. Hicks, Menominee.

Midland, Gladwin Counties—E. J. Doucher, Midland.

Monroe County—Charles T. Southworth, Monroe.

Montcalm County—A. J. Bower, Greenville;  
Muskegon, Oceana Counties—George L. Lefevre, Muskegon.

Newaygo County—William H. Barnum, Fremont.

Oakland County—Edmund A. Christian, Pontiac.

Ontonagon County—Andrew L. Swinton, Ontonagon.

Osceola, Lake County—Earl Fairbanks, Luther.

Otsego, Crawford, Oscoda, Roscommon, Ogemaw Counties—Harry W. Knapp, Gaylord.

Ottawa County—A. Leenhouts, Holland.

Presque Isle County—William W. Arscott, Rogers.

Saginaw County—Matthew Kollig, Saginaw.

Schoolcraft County—Andrew Nelson, Manistique.

St. Clair County—Charles B. Stockwell, Port Huron.

St. Joseph County—David M. Kane, Sturgis.

Sanilac County—James W. Scott, Sandusky.

Shiawassee County—A. M. Hume, Owosso.

Tuscola County—Arthur L. Seeley, Mayville.

Van Buren County—Francis C. Penoyar, South Haven.

Washtenaw County—Udo J. Wile, Ann Arbor.

Wayne County—Andrew P. Biddle, Detroit.

Wexford, Missaukee, Kalkaska Counties—Barlett H. McMullen, Cadillac.

#### PROGRAM—SPECIAL MEETING

MICHIGAN STATE MEDICAL SOCIETY, BATTLE CREEK, CALHOUN COUNTY,

MAY 10, 1917, 10 A. M.

1. Call to Order—President Biddle.
2. Invocation.
3. Object of Special Session—President Biddle.
4. Address—V. C. Vaughan, Sr., M.D.
5. Address—Governor, A. E. Sleeper.
6. Address—Hon. Woodbridge N. Ferris.
7. Address—Reuben Peterson.
8. Address—Representative Surgeon-General.
9. Report of Council—W. T. Dodge, Chairman.
10. Committees, Resolutions—General Business.

## Correspondence

Ann Arbor, Mich., March 24, 1917.

Dear Doctor:

At a meeting of the Michigan State Committee for Medical Preparedness held in Ann Arbor, March 17th, in pursuance with instructions from the Advisory Committee of National Defense, work was begun to form in each county of the State having a population of 10,000 or more "a sub-committee of five or more strong men who are known to be thoroughly loyal and ready to work for the common good in national defense."

The Committee decided that the best course to pursue would be to request one physician in the different counties, personally known to the Committee to name the other members of the sub-committee, such names to be sent to the State Committee for official confirmation.

In making your selections for the sub-committee please keep in mind the following instructions your State Committee has received from the Advisory Committee of National Defense.

1. The members of the sub-committees must be strong men who are known to be thoroughly loyal and ready to work for the common good in national defense.

2. The members of the sub-committees are to work to secure a definite number of medical men from their communities to join the Medical Reserve Corps.

3. Bear in mind that the field duty Reserve Officers must enter the Army Medical Service under the age of 45.

4. It is desirable that at least one member of the local Medical Officers' Reserve Corps be named as a member of the sub-committee.

A list of the men residing in your county who have been recommended for membership in the Medical Reserve Corps by the State Committee is herewith inclosed for your guidance, together with a list of men from your county who are officers in the Medical Reserve Corps, United States Army, Inactive List, according to a list furnished your State Committee by the Surgeon General's Office.

The State Committee does not need to inform you that haste is absolutely imperative. Send your nominations to the Chairman of the Committee at the earliest possible date. Your State Committee promises that there will be no delay so far as it is concerned.

Officially your sub-committee will be known as "The Auxiliary Medical Defense Committee of —"

Yours very truly,

REUBEN PETERSON,

Chairman, State Committee on Medical Preparedness.

Washington, March 24, 1917.

Dr. F. C. Warnshuis, Secretary State Medical Association, Grand Rapids, Mich.

My Dear Doctor Warnshuis:

We are anxious to increase the Medical Officers' Reserve Corps of the Army greatly and promptly in order that men may be trained for such duties as they may be called upon to fulfill.

In order that physicians may enter the Reserve Corps they must be examined either by an Officer of the Reserve Corps on the one hand, or by an Officer of the Medical Corps of the Army on the other hand.

It seems highly desirable that a few representative medical men from your state should enter the Reserve Corps so that examiners for that state may be officially designated by the Surgeon General of the Army. Let us urge, therefore, that the members of your State Committee, or other representative men, enter the Officers' Reserve Corps without delay. This is necessary in order to minimize the difficulties of recruiting Reserve Officers.

In the preparation for National Defense the first thing needed will be medical officers.

Physicians recommended for such service should be of the highest type. They should be free from suspicion of addiction to drugs or drink.

Medical Officers who go to field duty should by preference be under the age of forty-five.

The second thing needed will be men for the Army and Navy. Those men should be thoroughly examined physically.

That work will be done by medical officers.

Extreme care in such examinations is required in order to save delay, great inconvenience and vast sums of money.

As trained medical men will be needed the moment camps are established, it is incumbent upon the medical profession to prepare at once for the responsible duties which will devolve upon them.

Let us bespeak prompt and effective co-operation in this highly important matter.

Very sincerely yours,

F. F. SIMPSON,

Chief of Medical Section.

FRANKLIN MARTIN,

Member of Advisory Commission.

Detroit, April 6, 1917.

Publisher Journal of the Michigan State Medical Society, Powers Theater Building, Grand Rapids, Mich.

Dear Sir:

McGregor Institute desires to secure the services of a young physician, or even of an older man.

We would prefer to have the doctor devote all of his time to the work of the Institute, but it might be possible to allow him one-third of his time for other interests.

Equally important with medical knowledge would be an interest in and aptitude for social service work. That is, the Institute physician should use his intimate contact with the men not only to help them in health matters, but also to aid them in solving their complex personal difficulties. A young doctor here would have a competent committee of medical men as his advisers.

Salary would depend upon whether full or two-thirds time was given.

If you can make announcement of the foregoing in your columns we shall much appreciate it.

Very truly yours,

TRACY W. M'GREGOR.



New York, March 23, 1917.

My Dear Editor:

As a news item for our valued journal will give you the following information concerning myself.

I returned March 22, 1917, steamship *Espagne* from Bordeaux, after an exciting passage from submarine standpoint.

Since April 18, 1916, I have been on the staff of Hospital 43 Bis. A French-American Military Base located back of the Somme front in France.

Dr. Fitch, Rochester, N. Y., late Secretary of American Orthopedic association, is surgeon and chief. We two handled it alone, 180 beds.

Our work is largely bone, joint and skin work, though we had plenty of other work, but the Service de Santi reserved us as much as possible for bone and joints.

I returned to the U. S. in order to join the U. S. Army, which I soon shall volunteer for in Detroit, although I volunteered Feb. 5 from France.

Hoping that you can utilize the essential features of this letter.

Sincerely yours,

L. C. DONNELLY, M.D.

Orthopedic Surgeon.

727 Jefferson Ave., E., Detroit.

## Deaths

**Dr. R. H. Baird** of Howell died on March 23, at Vero, Florida where he and Mrs. Baird have spent the winter in the hope of recovery. For the past fifteen years he has enjoyed a very large practice in his vicinity but had to give up about a year ago owing to his health.

The following members of the profession of Michigan have passed away during the past month: Dr. Thomas Shaw, Ypsilanti; Dr. H. P. Martin, Ovid; Dr. Harvey L. Morris, Vassar; Dr. S. F. Chase, Caro; Dr. B. P. Scoville, Constantine, Dr. C. B. Chapin, Benton Harbor.

## State News Notes

**WANTED**—A competent physician to locate in a thriving village of Western Michigan. For particulars address No. 20, care *Journal*, M. S. M. S., 513 Powers Theatre Building, Grand Rapids, Mich.

**ANNUAL MEETING AT CINCINNATI, MAY 9, 10 and 11, 1917.**

The next annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at Cincinnati, May 9, 10 and 11, 1917. Members of the Association and other anti-tuberculosis workers are urged now to reserve these dates. Cincinnati offers many peculiar advantages for those interested in tuberculosis. It has a strong anti-tuberculosis league, a thoroughly efficient health department, a well equipped hospital, besides open air schools, dispensaries and many other agencies doing tuberculosis work. In addition, Cincinnati has recently been selected as the city in which the National Social Unit Organization will seek to make a unique health and community demonstra-

tion during the next three years under the direction of Mr. and Mrs. Wilber C. Phillips. By next May this experiment will be well under way. Cincinnati also enjoys the distinction of being the only large city in which the United States Public Health Service has made a thorough tuberculosis survey.

The chairmen of the various sections for the annual meeting are, Dr. Roger S. Morris, Cincinnati, Clinical Section; Dr. Paul S. Woolley, Cincinnati, Pathological Section; Dr. Charles P. Emerson, Indianapolis, Advisory Council; and Frank H. Mann, New York, Sociological Section. Programs for each section will be in the hands of the respective chairmen. A preliminary announcement of the program will be published in the April Bulletin of the National Association.

The Children's Bureau has been authorized by Dr. Frederick R. Green, Secretary of the Council on Health and Public Instruction, American Medical Association, to call your attention to the following letter:

"To the Presidents of County Societies:

"Encouraged by the success of their efforts last year, the Children's Bureau of the U. S. Department of Labor and the General Federation of Women's Clubs are planning to hold a second annual Baby Week throughout the country on May 1 to 6, 1917. The object of this campaign is to call attention to the importance of better methods for caring for babies, the necessity of protecting them against disease and the value and importance to our country and to future generations of these infant lives. The interest aroused by the observation of Baby Week last year as well as the growing attention given to child welfare and the reduction of infant mortality assures a successful celebration of Baby Week this year.

The Children's Bureau and Women's Club especially desire the co-operation and assistance of the organized medical profession. The work which they are doing is in close harmony with the work of the Council on Health and Public Instruction and with the principles and objects of the American Medical Association and its constituent state and component county societies. The active co-operation of all county societies is, therefore, earnestly requested. It is hoped that your county society at the first opportunity will take up this matter and will arrange to co-operate with the women's clubs and other organizations in your county and to assist to the extent of your ability in carrying out plans for Baby Week and in interesting the public in all measures for the reduction of infant mortality. If each of the two thousand county societies will do its part in making Baby Week a success in its own territory, the cause of public health will be materially advanced.

If you are interested in the campaign and will send a request for the circular and bulletins on Baby Week Campaigns issued by the Children's Bureau these publications will be sent to you.

Hoping that you may see fit to take up active work in this direction, I am

Yours very truly,

FREDERICK R. GREEN,

Secretary, Council on Health and Public Instruction, American Medical Association.

The annual meeting of Alienists and Neurologists will be held July 9th to Thursday July 12th, 1917, in the Red Room, LaSalle Hotel, Chicago, under the auspices of the Chicago Medical Society. Dr. George A. Zeller will act as Chairman. The program will be mailed June 28th, with abstract of each paper. Contributors to the program are solicited. This is a society without a membership fee.

Address, Secretary A. and N., Room 1218, 30 No. Michigan Ave., Chicago.

Dr. W. T. Dodge, Big Rapids; Dr. C. B. Burr, Flint; Dr. G. L. Le Fevre, Muskegon, and Dr. F. C. Warnshuis, Grand Rapids, composed a party that left Grand Rapids on March 31st and spent a week at the Clinics of Rochester and Minneapolis, Minn.

The Detroit Base Hospital is practically equipped and ready to respond when called. The Grand Rapids Base Hospital will be ready in thirty days. These two units will be able to care for 1,000 patients.

Your loyalty to your Country and your Flag makes it imperative that you should attend the special meeting on May 10th. May there be no "slackers" in the Michigan profession.

Dr. R. B. Smith, formerly of Crystal, has located in Alma where he will limit his practice to the eye, ear, nose and throat.

For the fifth time Dr. F. W. Sassaman has been elected health officer of Charlotte.

Dr. J. E. Peltier of Thompsonville has located in Newaygo.

Dr. A. K. Bennett has been elected health officer of Marquette.

Dr. R. Miller of Harbor Springs suffered a stroke of apoplexy March 30th.

Dr. R. L. Dixon, of Wahjamega, underwent an appendectomy April 3.

Dr. E. G. McConnell, of Newaygo, has moved to Wellston.

The Northern-Tri State Medical Association held its semi-annual meeting in Battle Creek on April 10.

#### DETROIT COLLEGE OF MEDICINE AND SURGERY—1917 ALUMNI CLINICS.

Saturday, May 26th, St. Mary's Hospital.—9-10 A. M. Dr. John Lee—Medicine; Dr. Theodore H. Smith, Urology; Dr. W. J. Seymour—Surgery; 10-11 A. M. Dr. W. M. Donald—Medicine; Dr. Eugene Smith—Ophthalmology; Dr. W. J. Seymour—Surgery; 11-1 P. M. Dr. W. E. Lower, Cleveland—Urology; 2-3 P. M. Children's Free Hospital—Dr. Frederick Burke—Pediatrics; Dr. Ray Connor—Ophthalmology; Dr. Daniel La Ferte—Orthopedics; Drs. B. R. Shurly and W. A. Deforet—RhinoLOGY; 3-4 P. M. Dr. Daniel LaFerte

—Orthopedics; Dr. B. R. Shurly—RhinoLOGY; 4-5 P. M. Dr. Alfred LaFerte—Orthopedics.

Monday, May 28th Harper Hospital.—9-10 A. M. Dr. C. W. Hitchcock in charge—Amphitheatre lecture, ward lecture; 10-11 A. M. Dr. C. G. Jennings in charge—Amphitheatre lecture, ward clinic, ward demonstration; 11-1 P. M. Dr. C. G. Jennings in charge—Dr. Carl D. Camp, University of Michigan—Cerebrospinal Syphilis; 2-3 P. M. Grace Hospital: Dr. J. B. Kennedy—Surgery; Dr. F. C. Kidner, Orthopedics; Dr. L. F. C. Wendt—Medicine; 3-4 P. M. Dr. Charles S. Kennedy—Diagnostic Surgery; Dr. R. J. Palmer—Diagnostic Surgery; Dr. D. J. Levy—Pediatrics; 4-5 P. M. Dr. R. S. Taylor—Dermatology; Dr. George H. Palmerlee—Military Surgery; 8 P. M. Wayne County Medical Society.

Tuesday, May 29th, Harper Hospital.—9-10 A. M. Dr. P. F. Morse in charge—Amphitheatre lecture; 10-11 A. M. Dr. J. H. Carstens in charge—Amphitheatre lecture, ward clinic; 11-1 P. M. Dr. P. M. Hickey in charge—Dr. L. H. Cole, New York City—Roentgenology.

Wednesday, May 30th, St. Mary's Hospital.—9-10 A. M. Dr. F. B. Walker—Surgery; Dr. Howard Coll—Gynecology; Dr. H. A. Reye—Neurology; 10-11 A. M. Dr. E. W. Mooney—Medicine; Dr. F. B. Walker—Surgery; Dr. R. W. Gellman—Ophthalmology; 2-3 P. M. Children's Free Hospital—Dr. C. D. Brooks—Surgery; Dr. B. R. Hoobler—Pediatrics; 3-4 P. M. Dr. Grant McDonald—Pediatrics; 8 P. M. Class Reunions, 1872-1877-1882-1887-1892-1897-1902-1907-1912.

Thursday, May 31st, Harper Hospital.—9-10 A. M. Dr. H. R. Varney in charge—Amphitheatre lecture, ward clinic; 10-11 A. M. Dr. E. W. Haass in charge—Amphitheatre lecture, ward clinic, ward demonstration; 11-1 P. M. Dr. E. W. Haass in charge—Dr. Earl S. Bullock, Silver City, N. M.—Tuberculosis; 2 P. M. Laboratory Demonstration—Parke, Davis and Co.; 3:30 P. M. Boat ride, Steamer Tashmoo, Annual meeting and election of officers on the boat. Guests at lunch of Drs. R. E. Mercer and Frank B. Walker.

Friday, June 1, St. Mary's Hospital.—9-10 A. M. Dr. Neal Hoskins—Medicine; Dr. R. C. Andries—Surgery; Dr. R. G. Shaw—RhinoLOGY; 10-11 A. M. Dr. A. P. Biddle—Dermatology; Dr. J. H. Andries—Surgery; Dr. Wm. E. Keane—Urology; 11-1 P. M. Dr. Dean Lewis, Chicago—Surgery.

Tuesday, May 22nd, Harper Hospital, 9-10 A. M. Dr. Ballin in charge, ward demonstration and operative clinic; 10-11 A. M. Amphitheatre lecture; 11-1 P. M. Dr. L. L. McArthur, Chicago—Surgery; 2-3 P. M. Dr. G. E. Frothingham in charge—Amphitheatre lecture, ward clinic, operative clinic; 3-4 P. M. Dr. Don M. Campbell in charge—Amphitheatre lecture, ward clinic, operative clinic; 4-5 P. M. Dr. W. E. Blodgett in charge—Amphitheatre lecture, ward clinic, operative clinic.

Wednesday, May 23rd, St. Mary's Hospital.—9-10 A. M. Dr. L. L. Zimmer—Gynecology; Dr. F. W. Robbins, Urology; 10-11 A. M. Dr. A. W. Ives—Psychiatry; Dr. T. A. McGraw—Medicine; 11-1 P. M. Richard L. Sutton, Kansas City—Dermatology; 2-4 P. M. Detroit Sanitarium, Drs. B. R. Shurly and H. M. Rich.

Thursday, May 24th, Providence Hospital.—



9-10 A. M. Dr. W. E. Welz—Obstetrics; Dr. R. E. Mercer and Dr. Wm. Woodworth—Laryngology; 10-11 A. M. Dr. Robt. Beattie—Ophthalmology; Dr. F. L. F. Stephenson—Medicine; Dr. R. E. Mercer and Dr. Wm. Woodworth—Rhinology; 2-3 P. M. Dr. David R. Clark—Neurology; Dr. James E. Davis—Surgery; 3-4 P. M. Drs. I. L. Polozker, Robt. Hull and White—Pediatrics; 4-5 P. M. Dr. G. Van Amber Brown, Dr. F. W. McNamara—Diagnostic Surgery.

Friday, May 25th, Harper Hospital.—9-10 A. M. Dr. L. J. Hirschman in charge—Amphitheatre lecture, ward clinic, operative clinic; 10-11 A. M. Dr. Angus McLean in charge—Amphitheatre lecture, ward clinic, operative clinic; 11-1 P. M. Dr. Angus McLean—Surgery; 2-5 P. M. Herman Kiefer Hospital—Drs. Guy L. Kiefer and George Sewell—Contagious Diseases; 8 P. M. Alumni Association Smoker and Vaudeville—Wayne County Medical Society Building—Luncheon—Guests of Dr. Herbert W. Hewitt; 2-3 P. M. Grace Hospital.—Dr. Herbert W. Hewitt—Surgery; Dr. John T. Watkins—Medicine; 3-4 P. M. Dr. W. L. Hartman—Urology; Dr. Carl R. Meloy—Laboratory demonstration; Dr. R. H. Stevens—Dermatology; 4-5 P. M. Dr. Harold Wilson—Laryngology; Dr. Geo. P. Myers—Surgery.

Saturday, June 2, Providence Hospital.—9-10 A. M. Dr. R. A. C. Wallenberg—Dermatology; Dr. A. S. Dewitt—Medicine; 10-11 A. M. Dr. H. Wellington Yates, Dr. E. A. Pillon—Gynecology; Dr. C. Hollister Judd—Obstetrics; Dr. Wadsworth Warren—Rhinology; 11-1 P. M. Dr. Willard Stone, Toledo, O.—Medicine; 2-3 P. M. Dr. E. J. Panzner—Surgery; Dr. J. H. Dempster—Ophthalmology; 3-4 P. M. Dr. Geo. C. Chene—Roentgenology; Drs. F. M. McDonald, Nicholas Galdonyi—Obstetrics; 8 P. M. Graduation Exercises.

*County Society News*

**MINUTES OF SPECIAL MEETING MICHIGAN STATE BOARD OF HEALTH, MARCH 16, 1917.**

Meeting called to order at 10 a. m., by the President.

Roll call showed the following members present:

- Dr. V. C. Vaughan, President.
- Vice Presidents, Dr. E. T. Abrams, Dr. A. P. Biddle and Mr. W. D. Farley.
- Dr. John L. Burkart, Secretary.

The Secretary then introduced the recently appointed members of the Board, Drs. Guy L. Kiefer of Detroit and Wm. F. English of Saginaw, as having been appointed by the Governor, confirmed by the senate and qualified under the State law as members of the Michigan State Board of Health and eligible to voice and vote thereon.

The President in some very fitting remarks, welcomed the two members to the Board and expressed a sincere desire for entire harmony in all the future actions of the board.

The Secretary, Dr. Burkart, then announced that the unexpired term of office of Dr. Robt. L.

Dixon, which he was completing, would terminate March 29, 1917, and inasmuch as he was not a candidate for reappointment, it would be necessary for the Board, at this time, to select his successor as provided by Act 67, P. A. 1915, wherein the recommendation of the State Board of Health was made a prerequisite for appointment by the Governor. The Secretary then submitted a resume of the work accomplished during his term of office and read a communication from the Secretary of the Conference of State and Provincial Boards of Health of N. America with the Surgeon General, U. S. Public Health Service, and thanked the members of the Board for the co-operation given and the confidence reposed in him.

Upon motion of Dr. E. T. Abrams, supported by Dr. Biddle, a committee was appointed to draft suitable resolutions, thanking Dr. Burkart for the faithful and capable service that he has performed during his tenure of office and, pursuant to this resolution, the chair appointed Drs. Abrams, Biddle and Mr. Farley to draft suitable resolutions to be presented to Dr. Burkart. The President then took occasion to commend the work of the present Secretary and expressed sincere regret at the proposed termination of his services because of a better position and assured the Secretary that the best wishes of the State Board of Health for success would accompany the Secretary in his new position.

The following resolution, presented by Dr. Abrams and supported by Mr. Farley, was adopted:

"In view of the fact that Dr. John L. Burkart, is not a candidate for reappointment as Secretary of the State Board of Health of Michigan and that certain members of the Board favor the appointment of Dr. DeKleine, while other members favor the appointment of Dr. R. M. Olin, be it resolved, That the Governor be informed that the appointment of either of these men will be satisfactory to the Board and that we do hereby recommend to him the appointment of either." The Secretary refused to vote upon the motion and was sustained by the chair.

Moved by Dr. Abrams, supported by Mr. Farley:

"That a copy of this resolution be transmitted immediately by the President of the Board to Governor Sleeper, for his action." Carried.

In pursuance with the foregoing resolution, the following letter was prepared by the Secretary and delivered to the President of the Board, for presentation to the Governor:

To His Excellency,  
The Honorable Albert E. Sleeper,  
Governor of Michigan.

Sir:

I have the honor to advise you that, at a special meeting of the State Board of Health, held in the office of the Secretary, at Lansing, Michigan, Friday, March 16, the following resolution was offered by Dr. E. T. Abrams, supported by Mr. Farley:

'In view of the fact that Dr. John L. Burkart is not a candidate for reappointment and that certain members of the Board favor the ap-

pointment of Dr. DeKleine, while other members favor the appointment of Dr. R. M. Olin. Be it Resolved: That the Governor be informed that the appointment of either of these men will be satisfactory to the Board and that we do hereby recommend to him the appointment of either.'

Unanimously adopted, the Secretary, Dr. Burkart, not voting.

Very respectfully yours,

(Sig.) V. C. VAUGHAN,  
President, Michigan State Board of Health.  
Official. JOHN L. BURKHART, Secretary.

### CHIPPEWA COUNTY.

A regular meeting of the Chippewa County Medical Society was held at the Park Hotel, this city, on Tuesday evening, April 3rd.

Vice-President R. E. Stocker in the chair; Minutes of the meeting held March 6th, were read and approved.

Under "Clinical Cases" Dr. O. H. Cox, U. S. P. H. S. reported a case of disease of the myocardium which had been diagnosed as tubercular trouble. Wassermann reaction was positive, and the patient is showing marked improvement under treatment for syphilis.

Dr. Winslow reported a case of acute appendicitis in a patient ten years old, in which an abscess had formed, accompanied with local peritonitis and severe pain. Free drainage was obtained and the patient left the hospital in four weeks. Symptoms of acute appendicitis reoccurred two weeks later at which time the appendix was removed, fibrous adhesions broken up, and kinks liberated.

Dr. Robert Bennie, President of the Upper Peninsula Medical Society, read a paper on "The Gastro-intestinal Tract as a Source of Infection" which was greatly enjoyed and fully discussed by the members.

It was moved and carried that the members of the society hereby signify their willingness to donate a reasonable amount of their time, gratuitously, to the inspection of school children of the city, if so desired by the officers of the School Board.

On motion, the meeting was adjourned, and the members were the guests of A. E. Marriott, Manager of the Park Hotel, to a complimentary dinner.

R. C. WINSLOW, Secretary.

### KENT COUNTY.

Since the last report of the Kent County Medical Society, four meetings have been held. On the evening of January 24th, Dr. Eugene Boise gave "Some Suggestions as to the Treatment of Pneumonia," and Dr. Frederick C. Kidner of Detroit read a paper on "Infantile Paralysis." On Feb. 14th, Dr. J. E. Meengs gave a paper on "Twenty Cases of Carcinoma of the Stomach," using a lantern to illustrate his remarks. Dr. Richard R. Smith then spoke on "First Principles

in the Diagnosis and Treatment of the Pelvic Disorders of Women." On the evening of Feb. 28th, a complimentary dinner was given to Dr. Andrew P. Biddle at the Colonial Room of the Pantlind hotel, with 70 guests present. Following this dinner, Dr. Biddle gave an excellent dermatological clinic. This proved a great success: a large variety of interesting cases some of extreme rarity, appearing before the society. Great credit is due Dr. Hooker for the work involved in providing such a clinic for our state President. A vote of thanks was tendered Dr. Biddle at the close of the meeting. Dr. J. B. Jackson also gave a paper on "Disorders of the Esophagus," illustrated with the lantern. At the meeting of March 14th, Dr. A. A. McNabb gave a "Report of two cases of Paralysis of the Circumflex Nerve Following Injury to the Shoulder Joint." This elicited an interesting discussion in which many participated. Dr. Wm. Fuller, who was to have read a paper on "The Physical Origin of the Faculties of the Mind," was unable to appear on account of illness.

The annual banquet of the Kent County Medical Society, held at the Hotel Pantlind on the evening of Feb. 19th was a huge success. Mr. Francis D. Campau, an attorney, read a paper on "Health Insurance." This and a historical study of the Grand Rapids hospitals, illustrated with the lantern and handled extremely well by "Dick" Smith, disposed of the serious part of the program. "Southie" Southwick, just back from the border told how to shoot, skin and stew a Mexican in the most delectable manner. Ferris N. Smith gave a case report which was "some" report. Starting with a pre-natal clinic and a Cesarean section, the poor patient acquired every disease known to science and was attended by every physician in Kent County—their pictures being thrown on the screen as various portions of suffering anatomy were removed from the patient. The agony ended with a premature death at the age of 96. Dr. "Hank" Pyle was last, but not least, on the program. His sword was whetted to a razor edge and many a slice of bacon did he cut. If at any future time we want satire combined with high class oratory, we shall know where to go. It gave a fitting climax to a "climatic" evening. Dr. Reuben Peterson of Ann Arbor handled the reins well and contributed greatly to the success of the party.

At a recent meeting of the Kent County Medical Society, the following resolutions were adopted. It was voted that a copy be sent to all the members of our society.

Resolved:

A—That it is the opinion of the Kent County Medical Society that any article in the public press commenting on the skill, knowledge or professional accomplishments of one or more of its members is unethical and shall be treated according to existing laws for unethical conduct.

(1) That this rule apply to such article or articles as may either be compiled by a member or members, or result from an interview with a press representative, dealing with

(a) Surgical operations of any sort.



(b) Medical treatments or the technic of medical and surgical procedures as advocated or practiced by said individual.

(c) The publication of any information regarding a patient or the patient's relatives which violates the patient's confidence or reflects upon the moral or physical condition of the patient.

B—That the Society does not believe that the publication of any practitioner's name, excepting the coroners' or court witnesses', in connection with any accident or police case, is ethical, nor is it of proper "news interest" to the community.

C—That the only exceptions to this rule be—

The publication of medical articles in lay journals which meet the approval of the censorship committee or the Society at large.

Press Censorship Committee.

Dr. G. McBride

Dr. T. D. Gordon

Dr. Ferris N. Smith, Chairman.

FRANK C. KINSEY, Secretary.

### ST. CLAIR COUNTY

The regular bimonthly meeting of the St. Clair Medical Society was held at the Harrington Hotel, Thursday evening, March 29, 1917.

Drs. Wm. Donald of Detroit and Richard Smith of Grand Rapids were the guests of the evening.

After dinner Dr. Chester introduced Dr. Donald who gave a very interesting paper on, "Alcohol, as a Food—Drink—Medicine." Dr. De Gurse opened the discussion followed by other members of the Society.

The president next introduced Dr. Smith who gave a lantern-slide demonstration on "Goiter," which was appreciated by all.

Following is a resolution introduced by Dr. Smith, of St. Clair, Mich.

The physicians of St. Clair County, in convention assembled, believing that all true men should work for the eradication of disease and the upbuilding of a cleaner and better humanity, hereby

Resolve, That we most heartily endorse the splendid work done by Dr. Wm. De Kleine and his able assistants in the tuberculosis survey, as being necessary for successful war upon the scourge of the human race.

Resolved, That we not only set the seal of our approval upon the work already done, but we demand of our representatives and senator in the Legislature, that they use every endeavor to have the appropriation of \$100,000 continued so that there may be no halting the work of exterminating this plague.

Resolved, That we would regard a failure to continue this appropriation as an injury to humanity and a discredit to our state, as it would indicate that, Michigan having begun the good work, had through false economy, gone backward and abandoned that protection of its citizens from an unnecessary disease, which it should be the duty of the state to furnish.

W. W. RYERSON, Secretary.

### WAYNE COUNTY.

At a general meeting of the Society, held March 19, 1917, a motion was passed authorizing the President to appoint a committee of twenty to be empowered to act with the Board of Health in the eradication of the present scarlet fever epidemic.

Dr. MacMillan (President) appointed the following committee:

Doctors Charles G. Jennings, F. W. Haass, Chas. Oakman, J. B. Kennedy, Harold Wilson, George McKean, Fred Organ, Wm. M. Donald, James E. Burgess, Chas. Kuhn, Mary C. Haskins, George Sipe, G. S. Field, Edward Mooney, Philip Froude, I. L. Polozker, C. H. Stiles, Neil Hoskins, F. E. F. Stephenson, James Cleland, Jr., H. R. Carstens.

Another motion was passed authorizing the President to appoint a committee of five to appear before the legislature in regard to proposed changes in the Board of Health. This motion also incorporated the following resolution:

"Whereas, It has come to the notice of the members of the Wayne County Medical Society, an organization composed of nearly nine hundred physicians living and practicing in Detroit, that a bill has been introduced from unknown sources to abolish the Board of Health and to substitute in its place one-man control in the hands of a commissioner.

"And Whereas, No opportunity whatever has been given to the people of Detroit, and especially to the medical profession, to discuss the merits of this bill.

"Be It Resolved, That the Wayne County Medical Society earnestly and vigorously protest against the passage of any bill of such vital importance to Detroit until after time for the fullest discussion and hearing before the proper committees has been provided for,

"Be It Further Resolved, That a copy of this resolution be forwarded to the proper committees of both Senate and House of Representatives, before whom these bills would come, and also to the Senators and Representatives from Wayne County."

The following resolution endorsing the candidacy of Dr. Andrew P. Biddle for School Inspector was also passed:

"Believing as we do, that the services of a physician trained in public health work and experience in public administrative work would be of inestimable value to the New School Board in safeguarding the health of the pupils and the teachers of the public schools and in teaching personal hygiene, and thus safeguarding the health of the community, and knowing that Dr. Andrew P. Biddle, by years of practice, by his services as a member of the State Board of Health and by training, is well fitted to discharge any duty which may devolve upon him,

"We, Members of the Wayne County Medical Society, earnestly endorse his candidacy as School Inspector for the two year term.

"The Secretary of the Society is hereby directed to transmit these views to the press of the city with the request that they be given publication."

HENRY R. CARSTENS, Secretary.

## Miscellany

### PROPAGANDA FOR REFORM.

*Effect of Opium Alkaloids on the Ureters.*—According to D. I. Macht morphin and the opium alkaloids having a similar constitution increase the contraction and produce a greater tonicity of the ureter, whereas papaverin and the opium alkaloids constituted similarly produce a slowing or total inhibition of the contraction and relaxation of the tonus. In opium and pantopon, which contains the total alkaloids of opium, the effect of the morphin group preponderates. Ureteral colic is due to spasmodic contractions of the ureter caused by the irritating calculus and hence the use of papaverin or opium is more rational than that of morphin. Furthermore, the slighter toxicity of papaverin, its tonus lowering power and its local analgesic properties suggest its local application in spasmodic conditions of the ureter (*Jour. A. M. A.*, March 3, 1917, p. 719.)

*The Willard Pyorrhea Treatment.*—After defrauding the public of amounts estimated by the federal investigators at \$75,000 a year by means of a fake cure for pyorrhea, F. W. Willard, M.D., D.D.S., has been denied the use of the United States mails. The business of the Willard concern, apparently owned by Oren Oneal, consisted of a mail-order plan of a so-called home treatment for pyorrhea or Riggs' disease (*Jour. A.M.A.*, Feb. 10, 1917, p. 477).

*Dating of Biologic Products.*—For the protection of the consumer as well as the manufacturer, the Council on Pharmacy and Chemistry has adopted a rule requiring that serums and vaccines and similar products to be accepted for New and Non-official Remedies must bear on each package the date of its manufacture in addition to the date required by federal law. The practice now followed by manufacturers of placing on the containers of biologic products the date beyond which these agents are not to be regarded as dependable (though in accordance with the federal law) has not been satisfactory. Except for diphtheria and tetanus antitoxin, in general there are no methods for determining the potency of serums and vaccines. At the present time, for the same material, one manufacturer will fix an expiration date of four months, others one year or even eighteen months. Obviously this lack of uniformity is unfair to the manufacturer who endeavors to supply a product as fresh as is commercially practicable and it also may lead the physician to form a false opinion regarding the potency of certain biologic products.

The new rule of the Council will enable the physician to know the age of a given product when it reaches him and will permit him to judge whether or not it has been kept unduly long. Moreover, it will prove not only helpful to the conscientious manufacturer and the physician but will also safeguard the patient (*Jour. A.M.A.*, March 3, 1917, p. 728).

*Succus Cineraria Maritima.*—In agreement with the report of the Council on Pharmacy and Chemistry holding the claims made for Succus Cineraria Maritima (Walker) unfounded, the federal government charged that the claim that by dropping its preparation into the eye cataract may be cured was false and fraudulent. In February, 1916 the Walker Pharmacal Company pleaded guilty. Since the government's prosecution, brought under the Food and Drugs Act, effects only the claims made on the trade-package of a preparation, the admittedly false claims were still made in circular letters sent to physicians as late as October, 1916 (*Jour. A.M.A.*, March 17, 1917, p. 864).

*Rheume Olum.*—The Council on Pharmacy and Chemistry reports that Rheume Olum (The Rheumeolum Chemical Co., Seattle, Wash.) is said to be composed of camphor 7 per cent., chloral hydrate 7 per cent., menthol  $2\frac{1}{8}$  per cent., methyl salicylate 25 per cent., oil cajuput  $2\frac{1}{2}$  per cent., oleoresin capsicum, lanolin, white wax, "qs." The Council found Rheume Olum unacceptable for New and Non-official Remedies because the amount of the potent oleoresin of capsicum was not declared, because unwarranted therapeutic claims were made, because the name was nondescriptive of its composition and therapeutically suggestive and because the fixed formula was considered irrational (*Jour. A.M.A.*, March 17, 1917, p. 865).

*The Sargol Case.*—The exploiters of Sargol, the get-fat-quick nostrum, were found guilty of fraud and were fined \$30,000 after promising that the business would be discontinued. Sargol was made by Parke, Davis & Co. at a price of 53 cents to 78 cents per thousand tablets. Sargol was stated to contain extract saw palmetto, calcium hypophosphate, sodium hypophosphate, potassium hypophosphate, lecithin, extract nux vomica. The trial is said to have cost the United States over \$100,000. Although the business was palpably fraudulent, although the claims made for the nostrum were palpably false, the defendants were able to employ physicians to go on the stand and swear that Sargol was a "flesh builder" and "bust developer" (*Jour. A.M.A.*, March 24, 1917, p. 927).



# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVI

GRAND RAPIDS, MICHIGAN, JUNE, 1917

No. 6

### SPECIAL MEETING OF THE COUNCIL, BATTLE CREEK, MICHIGAN, MAY 10, 1917.

A special session of the Council, in compliance with the call issued by the Chairman as published in the *Journal of the Michigan State Medical Society*, May, 1917, was called to order in the Post Tavern at Battle Creek at 8 p. m., May 9, 1917, with the following Councillors present: A. L. Seeley, A. M. Hume, W. J. Kay, W. J. DuBois, A. E. Bulson, S. K. Church, F. C. Witter, C. T. Southworth, B. H. McMullen; President, A. P. Biddle; Secretary, F. C. Warnshuis.

In the absence of the Chairman, Dr. W. T. Dodge, Vice-Chairman, Dr. W. J. Kay, presided.

President Biddle addressed the Council as follows:

The object of this special session of the Council is clearly defined. First, to devise means to secure Michigan's quota of Physicians for service in the War. The plan which is being carried out will be submitted by Dr. Reuben Peterson, Chairman of the Michigan Committee on Medical Preparedness. Secondly, to provide some practical means to safeguard the interests of those who enter the service of the United States. And thirdly, to devise some working plan to care for the families of those who go.

Some definite plans must be worked out tonight, to be presented to the meeting of the House of Delegates tomorrow for their acceptance or amendment.

Dr. Burr was invited by the President to address the meeting. He said: "Dr. Biddle refers to this as a tremendous responsibility and such it is indeed. Justice must be done to the physician who has gone to the front. We must plan something to relieve his necessities, retain his practice and his hospital appointments and keep his house in order so that when he returns he will find himself measurably comfortable and be well situated to take

up the old ends and knit together his practice. With this in view, I suggested in a recent article in the *Journal* that there should be appointed in every County Medical Society, a Committee composed of its most conscientious members to visit the families of physicians who have gone to the front and assure themselves that they lack nothing; that a fund should be created and placed in each County Society's Treasury to afford relief in need. This fund should be established and maintained through assessments and might be augmented from month to month by subscriptions or voluntary contributions. I also suggested that another fund be created for procuring luxuries for those at the front.

Such in brief is the plan which is more fully discussed in the *Journal*. It should be emphasized, reiterated, and said again that the men at home should accept appointments with the understanding that they are interim only and assume the care of patients of the men in service temporarily. They should be in honor bound to complete unselfishness. There is abundant opportunity for piracy. Not many, I am sure, will avail themselves of such opportunity and none will do so who are worthy of the name of physicians. The occasional pirate must be looked after by the decent body of men and I know of no other way than through the instrumentality of the County Medical Society. Dr. Warnshuis presented to me recently a plan that impressed me as in some respects superior to my own.

Discussion of the Proposed Plan was then engaged in.

It was moved by President Biddle that the Council be requested to present this plan to the meeting tomorrow, at a time specified by the President, and to urge its adoption.

Supported by Dr. Seeley. Carried.

Dr. Peterson then gave a report of the Medical Defense Committee.

It was moved by Dr. Hume, that at the proper time Dr. Peterson as Chairman of the Committee on Medical Defense, be requested to

present these facts to the House of Delegates. Carried.

It was moved by Dr. Southworth that the fall meeting be postponed subject to the call of the Council.

Supported by Dr. DuBois. Carried.

It was moved by President Biddle that the editor be authorized, during the period of war, to do what in his judgment and the judgment of the Publication Committee of the Council seems best to safe-guard the interest of the Society. Supported. Carried.

There being no further business the Council adjourned.

#### SECOND SESSION OF THE COUNCIL.

The second session of the Council was held at the Masonic Temple in Battle Creek at 12:30 p. m., on May 10, 1917. The Secretary reported that the House of Delegates and the General Session had unanimously adopted and approved a plan submitted by the Council for the conservation of the practices of members enlisting in the services of the United States Army and Navy.

Dr. McMullen, Chairman of the Finance Committee made a report recommending that the Secretary spread a special assessment of \$5.00 per member to create the Emergency Fund provided in the plan that was adopted. This was supported and carried.

The Chairman of the Finance Committee also recommended that the Secretary deposit this fund in a special bank and that the disbursements of this fund be effected by means of a voucher system signed by the Chairman of the Council, Chairman of the Finance Committee and Secretary of the Society.

It was moved by Dr. Seeley, supported by Dr. DuBois, that the working features of the plan adopted be referred to the respective Committees of the Council who are instructed to supervise the carrying out of all features advanced in the plan that was adopted for the conservation of the practices of enlisted members.

There being no further business the Council adjourned.

W. J. KAY, Chairman.

F. C. WARNSHUIS, Secretary.

## Minutes of the Special Meeting of the Michigan State Medical Society, Held at the Masonic Temple Battle Creek, Michigan, May 10, 1917

The Michigan State Medical Society met in special session, at the Masonic Temple, in Battle Creek, on Thursday, May 10, 1917, at 10 p. m., in compliance with the call that had been issued by the President of the Association, and as published in the *Journal of the Michigan State Medical Society*.

The meeting was called to order by Dr. W. L. Godfrey, President of the Calhoun County Medical Society.

Following a few introductory remarks, Attorney Joseph L. Hooper was called upon for an address of welcome.

#### MR. HOOPER'S ADDRESS.

Mr. President, Gentlemen of the Michigan State Medical Association:

I am here in a double capacity today—I have been asked to formally welcome you, this body of Michigan's medical men, to the city of Battle Creek, which I do most heartily, and cordially. You will find—though the most of you know something of

Battle Creek—that it is a city of hearty welcomes; that she is glad to receive visitors, and especially visitors of the character of the men who are here today in our midst. So I am not going to spend more time in my welcome here to you except to say that Battle Creek is glad that on this occasion, this auspicious and yet most serious occasion, the medical men of Michigan have the fortune, and we have had the good fortune to meet here today.

I have been asked by my friends upon the platform here to do more than this—to speak of the occasion upon which we are assembled here; to say something of its import—the chief reason perhaps.

I do not know as anything that I could say here at this time that would impress upon men of the intelligence that men must necessarily possess who are doctors, as to the seriousness of this present occasion. I can only say something of the moral character of the occasion with which we are confronted at this time, and of the position which the physician and the surgeon occupy.

I believe, and this is not original with me, for many have uttered it before, that we are confronted now by not only the most serious crisis in American history, but the most serious crisis that the world



has ever seen. The very aspect of this room proves that. One would not need to look beyond the flag of our country to the banners of England and France, which for the first time in the history of this city at least, are gathered together and draped in the same building, to know that events, stirring and momentous, and freighted with utmost importance to the history of the world are confronting us. We know now, although it has taken a long time for our eyes to be opened to the fact, but we know now that we are engaged in the most titanic contest, with the greatest issues at stake, that a nation has ever engaged in, in the history of all time.

We know that upon one side are lined up the forces of Democracy, not the forces of anarchy, not the forces of rebellion, but the forces of a Democracy of the type represented by England and her own glorious ally the French, (applause) and by our own Republic—we know that upon the other side guided by intelligence, guided by efficiency, guided by all that science and art have been to the world, are lined up a people who in themselves have the inherent seeds of democracy, of republicanism, but who have been led on by that star of militarism which we are to pour out all our blood and treasure to wipe from the earth and give to Germany and to Austria and all others like them a government of democracy such as is enjoyed by Great Britain, France and the United States' (great applause).

This is the issue, and this is the real thing before us. Somebody has said that the world must be either all Republican or all Cossack. The world is not going to be Cossack but it is going to be Republican! (Applause). Democracy must march on with triumphant progress because it is in the very nature of things, that which can remove the canker upon society such as the Prussian military autocracy has made itself. We Americans must not be remiss in our duty; we must not be "slackers," we must not die like slaves in the night, but with the might which comes with right we must battle for truth and justice. We must do our duty, first, last and always in this enormous struggle for the emancipation of those who now are enslaved by the thrall-dom of militarism. (Applause).

You medical men—it seems strange to me when I look at you here, and think of your mission for alleviating pain and suffering, that I should stand here and attempt to stir you in any way toward helping our country in time of war. It is not necessary for me to do this, or even talk to you along that line; but we must realize, we must get into the seriousness of it—we must come everyone of us individually to remember that just as long as any of us is derelict in his duty, our country is not one hundred million strong as we would have it. We are at war with imperialism—it is not, as President Wilson has said, that we are seeking indemnity for the wrongs done us; it is not the acquisition of new territory—not that at all—but there is a great moral debt resting upon us that we must discharge and if America is to justify herself in the world's history; if she is to do what we have believed America would do when great crisis arose—we must rise as one man and meet the issue.

In the darkest days of the Revolution, when our

country lay bleeding and prostrate, France sent her noble young son to our shores and he laid his virgin sword at the feet of Washington. We must not be derelict in our duty. Conscription or no conscription, volunteer or no volunteer, let us send them back our own bravest and best. Let us send back our ex-President, Theodore Roosevelt to France (great and prolonged cheers). Let us send him back with his Republican army; let the people of France see the gleam of Yankee steel. Let them see the flag wave over an army of Americans and it will give heart to the struggling women and fainting men; to the Allies who are now our allies, who have been fighting our battles and the battles of humanity. Let us do it. (Applause).

And let us remember that in entering this strife, we are entering it with powers numbering over one hundred million; remember that they are strongly entrenched upon their own territory; that they have food; that the motive that controls them will and does lead them to use poisonous gas, piracy, murder, rape or whatever other crime that may seem expedient to beat us—remember that the German newspapers say that after the war they do not care who pays them an indemnity, but they must have a good thumping and indemnity, and some want it amended by striking out all after the word "thumping." Remember that they will be with us—they will fight. We can talk here today, but we must *do*—we must act for tomorrow.

I could talk about this much longer, but I have been asked to limit my time to ten minutes. I do wish to say to you, gentlemen, that I have been glad for the privilege of putting these things, which we all know. I am saying nothing new, before this capable, representative body of Michigan citizens and professional men. I am not dealing in extravagance when I say that nearest to the men of my profession, in my heart, have always been the members of the medical profession. I know the value of the services of the medical profession to the world. I know how much they have always given up, the sacrifices for their profession and for science, but the greatest sacrifices are yet to come. Men must leave their families; leave paying business; they must do things that will be a positive harm to them, *but it is for our country*.

And after all, one country, brethren,  
We must rise or fall with the Supreme Republic  
We must be the makers of her immortality,  
Her glory, fame, her freedom or her shame,  
Liegeman of God and fathers of the free.

After all, 'tis freedom,  
Wears the loveliest coronal,  
Her brow is toward the sunrise;  
From the sod she breaths the breath of patriots.  
Every clod answers her call and rises like a wall  
Against the foes of liberty and God.

At this point in the proceedings the meeting was turned over to the State Society, with President A. P. Biddle in the Chair.

Dr. Biddle: I shall ask the Secretary to read the call of the meeting.

Secretary: (Reads Call.)

Chairman: In this time of great stress, we would not do otherwise than to ask divine blessing on our deliberations:

Invocation by Rev. Barnes.

DR. BIDDLE.

Members of the House of Delegates and other Members of the Michigan State Medical Society:

It has seemed expedient that I should call you together at this time for a solemn purpose and have asked all speakers to dwell upon this solemnly. It may be that this gathering will be epoch-making.

It took not more than 11,000 men to conquer Cuba and less than 20,000 to take the Philippines. Today, as war is waged, this is a mere handful, for we reckon now by the million. So I shall try to explain why it is that the medical profession must give to the services of the government so large a quota of its membership.

During the Spanish-American war but few medical officers were needed; a few attached to each regiment and a few others called from civil life; but today it is calculated that for every 1,000 personnel seven doctors are required. This number takes in only those who are actually with the troops and does not take into consideration those engaged in Red Cross work, those held at base and city hospitals or engaged in other military relief work. So it is estimated that at least 10,000 physicians will be required for every million of personnel. And, if the government is to raise, as it is said, 2,000,000 men, it means that it will need in its service 20,000 doctors gathered from throughout the United States. Not all of these will be engaged at the same time, but there will be those who are in active service and those held in reserve to take their places; for, remember, the battle of today takes the life of the doctor as it does the life of the fighting man. At the Battle of the Somme there were hundreds of doctors lost, so I think that before we get through at least 25,000 physicians and surgeons will be needed.

I have been asked to explain the status of these physicians. In the first place, the Medical Corps of the Regular Army, while an excellent and efficient nucleus, is not and never will be in times of peace sufficient in number to meet the exigencies of war.

Here 1,000 to 1,500 more medical officers are needed. To meet the laws governing promotion and retirement those who desire to enter the regular service must be below 35 years of

age, preferably below 32 years. They should make application direct to the Surgeon-General, United States Army. If accepted, they will probably be sent to the Army Medical School, Washington, D. C., for training.

Secondly, if a new army of 500,000 men is to be created, 3,500 medical officers will be needed to examine the personnel and to take care of the officers and men afterwards. Here the younger physicians also are desired, men preferably not over 45 years of age.

The older physician or surgeon enters upon duties with which he is familiar, the hospital ward which has been his accustomed walk; but the younger medical officer must be also (and primarily) a military man. He has charge of men and is responsible for them. He must know how to handle them, must familiarize himself with camp sanitation and with a tremendous amount of detail paper work, for the record of his cases must be complete and exact. Besides, especially if he be attached to the ambulance service, he must learn how to handle the sick and the wounded. These younger men will probably be sent to the training and mobilization camps, later to go with the troops to the front.

At the time of the Spanish-American War most of the troops came from the National Guards of the States and when mustered into the service of the United States, became U. S. Volunteers, though retaining their State designation. So when the first troops left this State in 1898, we went as the 31st Michigan Volunteer Infantry, (taking the number after the 30 regiments of infantry which served during the Civil War). With these troops I had the honor of going as Major and Surgeon. Two assistants medical officers accompanied the regiment, one with the rank of Captain, the other with the rank of First Lieutenant.

In peace time this number is sufficient, but we found when we got to the Southern mobilization camp, when illness came among us, that we needed extra medical men, and we drew from civil life the contract surgeon. Now the contract surgeon was in an anomalous position, satisfactory neither to himself nor to the government. He had the relative grade of a First Lieutenant; but no matter how long he remained in the service, or how efficient he was, there was no advancement; and in the army the inducement of service is advancement.

Eight years ago the government conceived the plan of taking over from civil life the brain and experience of its best physicians and sur-



geons. The corps was known as the Medical Reserve Corps, which in time of peace was to prepare men for service in war. A commission was issued either as a First Lieutenant, Captain or Major. The First Lieutenant was expected to attend camp instructions and drilling once a year for the purpose already stated, but service was not obligatory, even in war time. The Captain and Major Surgeons were not to be called upon for service in the field in time of peace, because it is not absolutely necessary for officers of these grades to have military training.

Gradually Congress improved the status of this corps; but, because of the lack of authority to call the officers into service when needed, it will pass out of existence on June 2nd, and be merged into the Officers' Reserve Corps. Those accepting a Commission in this latter Corps will be commissioned by the President for five years. During peace time the medical officer holding rank of First Lieutenant will be expected to attend once a year a camp of instruction, but during war times the service of all doctors of the Officers' Reserve Corps are at the disposal of the government. If any of you now hold a Commission in the Medical Reserve Corps, you must be recommissioned in the Medical Section of the Officers' Reserve Corps; but you have not accepted the new commission until you have taken the oath of allegiance. When accepted, however, the Government can send you anywhere where the exigencies of the service demands. When the new army is created it is probable that it will need a great many medical officers and the government will draw upon the Officers' Reserve Corps for this quota.

After the Spanish-American war the efficiency in this country and abroad of the Red Cross Service in national emergencies, such as floods, earthquakes, etc., became so marked that it was incorporated as a National Body, of which the President of the United States is the titular head. This body has offered its services to the government in case of war, and the government has accepted the service, provided it, the Red Cross, meets the standard set up by the government: in other words, the government has accepted the Red Cross Base Hospital Unit, provided its equipment is up to the standard of a military 500 bed hospital. The equipment must be provided by private subscription, but the moment the Unit is accepted by the government, the government takes it over and finances it and details a certain number of its medical officers to the hospital. There are certain

advantages which go with such a Unit. One works with the men with whom one has been accustomed to work. I think the understanding is that those who go with the base hospital pledge themselves to go for two years, but I do not believe the government is under obligation to hold the medical officers to this service. If after the two years, the services of these officers are further needed in France, I see nothing in the law to prevent the government from making use of them. The Red Cross Base Hospital is a civil body taken over by the government and after the war it returns to its own and waits for the next emergency. The name given to the Base Hospital is simply complimentary and usually refers to the locality in which the hospital is equipped. It requires a large personnel, a certain number of doctors, nurses, etc., in all about 225.

There is another force which the government will take or already has taken into its service, and which, from the present prospects, will see the firing line before the troops are equipped next September. I speak of what is known as the National Guard of the State. When accepted by the general government it becomes a part of the Federal Guard and is a part of the regular army.

There are also many advantages in being with the Federal Guard. One goes with men one has known in one's own town; one stays with these men, because the government has promised that the Federal Guard will be retained as separate Units. One will care for the men one has known, and sweeter than all, one will return with the men with whom one has slept and fought, and who will be the best friends one will ever have. The sweetest experience in my life has been the association with those who went with me to the Spanish-American war. I say this, because some think that association with the Federal troops is less desirable than a commission in the Officers' Reserve Corps, but this is not at all necessarily the case.

A few words as to where those of you who go to the front will be sent. A certain number must be with the soldiers on the firing line, or in the trenches, or wherever they may be. It requires youth to be there. Men of my age can not expect to stand the hardships that men do who are from 23 to 35 years of age. Those who have charge of ambulances must frequently be on the firing line, and to this the young man only should be attached. Back of this is the evacuation hospital, where those who have been

injured must be examined and, when dangerously wounded, immediately cared for; and those less dangerously wounded and less ill will be sent further back. Here also, must there be facilities for the treatment of wounds which are not of a serious nature, so that those men may be returned as quickly as possible to the firing line. Back of this, the distance to vary according to exigencies, is the base hospital, and possibly further down the line, the City Hospital. So you see how many medical officers are required to meet the demands of war.

One word more to you. I want you to know that those of you who go away will have the care and guidance of the State Medical Society. I want you to feel that we only wish that we were younger men, so that we too could go to the front. Another purpose of this meeting is to present to this society for consideration definite plans for the care of those who go; not so much a financial care as the care of their families. My experience has been that almost every physician is brave enough to go wherever duty calls him, but he is anxious for the wife, or the baby, or the mother or the sister left at home; and I promise you that these members shall be taken care of wherever we find that such care is needed.

We know that it is a sacrifice to go, but the medical profession is a profession of sacrifice; so I ask of you who can to go, not because you love your family less, but because you love your country and freedom more.

Chairman: I want a few words from a man who has always been in the front rank in defense of patriotism and freedom.

During the Spanish-American war we went out with practically no medical equipment. Soon after our arrival at Chickamauga Park, Ga., May, 1898, I met on the road outside of the camp this man, who asked me what he could do for us. I said: "We have nothing. We need everything." He went back to his home and within one week sent me \$100.00, collected from the citizens of Flint, and with the \$200.00 which Governor Pingree of Michigan sent me, we had enough to establish a credit in Chattanooga, and to obtain the necessary temporary supplies.

I introduce to you Dr. C. B. Burr of Flint.

#### DR. BURR'S ADDRESS.

Mr. President, fellow members of the State Medical Society and other fellow-citizens of this magnificent democracy, of which the starry banner over my head is the symbol—a democracy born with

the Declaration of Independence—established under Washington, and the Revolutionary patriots—re-enforced and amended by the Immortal Lincoln who declared that government of the people, by the people and for the people should not perish from the earth—maintained through stress and storm, by Cleveland, by McKinley, and by that gallant soul, Col. Theodore Roosevelt (applause)—and now re-affirmed in beautiful diction in that sublime state paper of Pres. Woodrow Wilson. (Applause).

I thank God every day, if I don't do it audibly, and in a conventional way, at least I do in my heart, that I live in a land where the poorest and the humblest individual, has rights which the wealthiest and the greatest is bound to respect. I live in a land, and I pray that I may continue to live in a land under these influences and these conditions—not dominated by Kaiser or Czar or King, or controlled in any measure by pusillanimous princes, but where the people have some rights and can give individual expression to what they want and what they think is expedient for them; where men are not driven to slaughter—I use the word advisedly—"led" is out of fashion in war—those that drive men to war under imperial edicts, are themselves in bomb-proof compartments. There is no more leading but men are driven, as cattle to the shambles.

Against that sort of thing this nation has enlisted to do its part. It has enlisted along with those fighting under these flags (pointing to the British and French flags). They are foreign flags no longer—but flags of countries that with the assistance of this country, will, I hope and pray, and devoutly believe, eventually establish the principles of democracy for all time.

The world has been cursed with Kaisers and Emperors and Kings long enough. I got off a similar expression to this in a patriotic meeting in Flint some weeks ago, and afterwards Dr. Manwaring told me that there came to his office a woman who said that she had never seen Dr. Burr before, until she heard him at this meeting, and "didn't know up to that time that he was an anarchist." I deny being an anarchist, but if it is necessary to apply a name to those who wish to be a little out of the way, who have outgrown medieval fuss and feathers of courts and castes and kings, why, I am willing to range myself along with those who want them out of the way, under whatever name you may call them.

On a ship going over in 1909, I became very well acquainted with a German, a manufacturer, living at Elberfeld, and a very fine fellow. He asked me where I was going, and I told him to the Kraepelin Klinik in Unnich and that I liked Germany very much. He asked me why I liked it and I gave various reasons—the art, the music, and the many attractions. These are the things that I like about Germany. I told him that Bavaria—I know little personally of Prussia—was restful to me, and I liked to go there.

Then he said, "I like the United States," and went on to tell me why. He said, "You are not afflicted there with castes as we are in Germany." He told me about social planes, first the Emperor and his Court, then the high Military Officers, then the high Officials of the Government, then the Ju-



dicial Officers, then those in education, the doctors of letters and so on, and on down pretty nearly to the bottom, were the ordinary physician and lawyer, and at the very bottom, was the manufacturer. "We are at the very bottom of the whole lot," he declared. I said "I think the most influential man in Flint, is a manufacturer." But said he, "Not so with us; but when an officer of the army wants a wife that will be thrifty and make him a good home, and bring up his family nicely, he 'comes down' to our caste, and takes her, and thereafter our sister is lost to us. We may not even visit her. That is why I like the United States."

Well, I presume that poor fellow's bones are bleaching somewhere in France—but there must be a lot of this very sentiment in Germany, unorganized. I am afraid that, any hopes of revolutionary proceedings in Germany to contribute to the termination of these awful war calamities, is not well based, because of the habits of thinking that have been instilled and driven into their "subjects" by those at the top who have dominated all the forces, mental and physical of that wonderful country.

Those of us who have nearly completed our lives, are, it seems to me, very fortunate that we have lived in the most interesting period of the world's history. We have seen a great deal of what is called progress—how much of what we call progress is but a veneer, I do not know. Certainly, ideals have all been shot to pieces, since the Kaiser put his cloven foot in Belgium. We think now, in terms of slaughter, we talk of these things—they have become almost the only topics of conversation. It seems to me that I had never seen in the former decades of life, so much progress in the altruistic, as in the decade previous to the outbreak of this war, but it has all gone aglimmering and what is there—the seed of it that is left—that exists no doubt—will have to ripen again. It will bring forth fruit in the times of reconstruction—God only knows when. Sinister influences have been at work, and our ideals have been destroyed. All the arts and the sciences, save one group, are devoted now to purposes of destruction. Physics, the industrial arts, chemistry, even photography devoted to destruction, and the only sciences and arts engaged in mending that which is broken and maintaining that which is well, are medicine, and the arts of sciences thereto allied, dentistry, nursing, pharmacy, etc. Is not that fine? I have never been so proud of my vocation, as during the last two years. It is the only conservative force in war that I know of. Even agriculture devotes its products largely to the maintenance of armies.

We are in a more topsy-turvy condition and in a more general mix-up than we might have been if we had begun two and a half years ago to get ready, but we will get things all adjusted after a time and will soon be in a state of relative readiness. Those who have gone and are going to the front, preach the gospel of preparedness more impressively than anything we can say. It is a strange thing that so recently as six months ago, a physician said "What is the use of all this preparedness agitation?" "And what is the use of so much money being expended? If one-half of the amount were spent in education, there would be much more good

come from it." Platitudes of this sort which ignore the obvious facts of life have been too common, but they have now lost any force they ever had and we are up against it. We are not ready but we will get ready unless I mistake the American spirit and the physicians here are going to do their part. (Applause). They will do their part cheerfully and willingly; they will bear the brunt, and their labors will be of a ghastly, sorrow-provoking, troublesome character, but they will meet the emergency—that I have no doubt of at all—and your presence here indicates that you are of the same mind.

We have paid a high price for crowned heads, and I hope and pray that the remaining ones will be uncrowned. We must relearn that there is something in the world besides efficiency—efficiency is not everything—I have grown almost to abominate the word. There are humanities, kindly sentiments, emotions that are worth-while—all these things that have been exemplified in this country, which must eventually come back into their own; and dominate as they have dominated here for the last one hundred years. Crowned heads, court intrigue and secret diplomacy will have to go when democracy is triumphant. In a few years there will be a revolutionized world, and in the re-building of that, the physicians will have their part as they have always had a part in doing those things which make for good. They will not fail. (Applause).

Chairman: We will now listen to the report of the Chairman of the Michigan Committee, Dr. Reuben Peterson of Ann Arbor.

Mr. President and Members of the Michigan State Medical Society:

I desire to make a brief report of what has been accomplished by the Michigan State Committee for Medical Preparedness. This committee, as you know, was appointed by the Advisory Committee of the Council of National Defense to secure from among the medical profession of Michigan 600 physicians for the Reserve Corps of the United States Army. The first plan tried, the selection of six hundred or more physicians by the committee followed by requests from the War Department for those selected to join the Reserve Corps, was not very successful. War had not been declared and very few physicians took advantage of the request to enroll.

When war was declared and it became evident that a large army would be raised, the Advisory Committee tried another plan which I am glad to say has been very successful. It directed each State Committee to appoint auxiliary medical defense committees consisting of prominent physicians in every county or, in certain instances, groups of counties in the State. These committees were to canvass thoroughly physicians in their respective counties between the ages of 22 and 55 and urge all, professionally, physically and morally fit, to send in their applications for the Medical Reserve Corps.

As Chairman of the Michigan State Committee, I am pleased to report that the entire State has been thoroughly organized according to the plan outlined above. Fifty-nine county committees have been

appointed, the chairmen selected and the entire machinery provided so that the best physicians in the State may have the opportunity of applying for positions in the Medical Reserve Corps. One can see at a glance the advantage of such a system for securing the very best men in the State for the Reserve Corps. No State Committee can hope to know personally the physicians in each county and their fitness for the Reserve Corps as can the members of the county committees, and this is very important for there is no room in any army for physicians of a certain type, those who are unfortunate enough to be victims of bad habits, who are alcoholics or addicted to the use of drugs.

The State Committee, then, places the responsibility for the selection of the men for the Reserve Corps upon the county committees which are supposed to exercise due care in their recommendations.

There has been some criticism about not hearing from the War Department after application blanks have been sent in, but it must be remembered that there have been thousands of applications for the Medical Reserve Corps during the past few weeks with a corresponding rush of work in the War Department. Again, they may be waiting for June 3rd next when the new Medical Officers' Reserve Corps, comes into existence. In the end all commissions will be duly issued up to the number needed for the war.

It gives me great pleasure to inform you that there are excellent prospects that Michigan will furnish her full quota of physicians for the Medical Officers' Reserve Corps, if we can judge by the returns received from the chairmen of the different auxiliary defense committee throughout the State. I have received reports up to yesterday from thirty-six chairmen who report in their respective counties 1576 physicians between the ages of 22 and 55. Of these 998 have been recommended for the Reserve Corps. Although of this number only 116 have actually sent in their applications, undoubtedly many applications will result from this meeting, since many have delayed until they could learn if their services were actually needed. As far as I am able to learn, about one hundred Michigan physicians have already been commissioned. Thus in a comparatively short period nearly two-thirds of the number of medical officers required from Michigan have already been secured. I doubt not that in a relatively short time we shall see 600 medical officers enrolled from Michigan and more if the country needs them.

### THE DUTY OF THE MEDICAL PROFESSION OF MICHIGAN IN THE PRESENT NATIONAL CRISIS.

REUBEN PETERSON, M.D.

Chairman Michigan State Committee For Medical Preparedness.

ANN ARBOR, MICH.

Events have been moving apace since the call was sent out summoning the members of the Michigan State Medical Society to meet in extraordinary session. One is fairly bewildered

at the tremendous activities pertaining to war in which seemingly the entire country is engaged. It is as if a powerful sleeping giant had been aroused and were preparing to give battle to an equally powerful but unscrupulous adversary. On every hand we see agencies at work, directed by the government at Washington, to prepare one hundred and ten million people for the task before them. Gone are the academic questions that have been troubling us for the last two and a half years. It is well that this is so, for as a nation we were becoming confused over questions which, after all, related to international law with which only a few were familiar. What a relief to put this all in the background and come out in the open. What a privilege to be allowed to put our hearts and souls into a task big enough for any nation, the settling of the question whether we are to be free or slaves. For let us not forget in this most solemn hour that if we do not win in this struggle, as win we will, that America, the land we love, will no longer be the land of the free but a country dictated to by a power whose ruthlessness has only too well been demonstrated during the past two and a half years. Is there one of us who would not sacrifice his all, give life itself, rather than to submit to such a condition of affairs?

Thank God, the time is past when a speaker has to pick and choose his words lest he offend some of his auditors. Whatever may have been our differences of opinion, they have disappeared now, swallowed up in the great patriotic impulse, sweeping the land, to do our best in the struggle before us. Where are the deeds of violence, the springing to arms of five hundred thousand trained reservists owing allegiance to another country? Where are all the dreadful things which were going to happen to us if war were declared? A few hundred or thousands have been arrested by the secret service but so quietly as to cause hardly a comment. Already in the excitement of getting ready for the struggle we have forgotten who strove to arouse our fears. For we have turned to the reverse side of the picture and are amazed and proud withal, as amazed as must be those on the other side of the water who thought differently, to see the citizens of a mighty nation united in a common cause. It is one of the most amazing and splendid things in history, this unity in a nation, where it was hard to impress upon the people that there was any real danger to their national institutions.

As a nation we have been called many harsh



names, epithets it was hard to hear and not strike back. Most of us became somewhat restless under it all and were inclined to think we could do things much better were we given a chance. Yet, as we gird up our loins for the battle, the greatest conflict the world has ever known, are we not glad we have as a leader, as Commander-in-Chief of the Army and Navy of these, the United States, one whose vision was clearer than ours, who bore abuse without a murmur until the hour came when the entire nation as one man was ready to accept the gage of battle? In such a man and those he has gathered about him we have infinite trust.

Politics! How insignificant the word sounds amid our more serious perplexities. Do you know the party affiliations of the members of the Council of National Defense, the Navy Board or many other agencies at work in Washington? The nation demands that the work be done by our best, and cares little for extraneous matters that meant much before the war. Woe to him occupying a high position who can not or will not see this. The country has had enough of experiments and the voice of the people heard at Washington has been responsible for the universal military service bill, revolutionary so far as this country is concerned, yet passed by both houses of Congress by large majorities; and so it will be with other equally important measures. The times are too serious and the stakes too great to spend time over trivialities. Mistakes will be made, to be sure. No war can be prosecuted without mistakes. It simply is a question of who will make the fewest and recover quickest. We are fortunate in being in a position to profit by the mistakes of others, and we shall profit by them, for with all our faults it can not be said that the American people are hidebound and unready to adapt themselves to the need of the hour.

This then shall be the reply to those who have scoffed at America, who have claimed she has a vulgar soul and is merely striving for wealth, that she has become flabby and that her fighting qualities are a joke! We realize that we have been careless about some things, such as preparedness, which were important but did not interest us much; we confess that we are a peaceful nation and that we have stood more than most countries would without hitting back; we confess that we continued to play the neutral game when our hearts were not in it; but, in spite of all this, now that the die is cast and we are in this terrible struggle there will

be no turning back no matter who draws out or who comes in. To the cause of democracy, as against autocracy and the military overlords, we pledge the united strength and energy of a nation whose spiritual and material development has been the most remarkable in the history of the world; and last but not least, we pledge our own lives and those of our sons to the cause, ready to make the necessary sacrifices which we know only too well are coming; and we will do all this with no particular hate towards those who have deserved the hate and scorn of civilized nations but only as a means of overthrowing a system of government which has been responsible for this world conflict which we hate and despise as too utterly silly and idiotic for words. And when the task is done, we pledge, furthermore, that we will return to our pursuits with glad hearts and be as unmilitaristic as before.

And now, how are we doctors of Michigan to do our part, for I assume that this gathering means that we recognize the need of clear thinking and planning that our efforts may be productive of the greatest good. We are most fortunate in entering the war under the guidance of an Army Medical Corps which has been entirely reorganized since the Spanish-American war and now has a personnel equal to any in the world. The old abominable army contract surgeon system has been abolished and through the establishment of a Medical Officers' Reserve Corps the medical service in the Army has been placed in a position where any civilian doctor can serve without feeling that a slur is being cast upon his professional services.

It is not strange that there should be confusion in the minds of civilian physicians in regard to the different kinds of medical services in the Army and Navy, for in times of peace the average doctor, with an occasional exception, takes little interest in such matters. Suddenly he is confronted with a situation where the call comes for many thousands of physicians to render medical aid to a large army. Sacrifice of time and leisure is nothing new to the doctor for it has been a part of his daily life. Above all other callings and professions the members of the medical profession have always responded to the call of duty. They are ready in the present crisis if they can be shown that their services are really needed. But a doctor must be convinced of this else he will think that he has a greater duty to his patients who desire and need him and are not satisfied with the

services of another physician no matter how skilled he may be.

Thus the first question we must settle today is that vital one of whether we are needed. This is even more important than the kinds of services, the enlistment period, the amount of compensation and many other seemingly urgent questions which have been asked me during the past six weeks.

*Now make no mistake about the need.* We are needed fast enough if we can judge by what has happened during the past few weeks. Most people's minds are dwelling on whether the submarine menace is going to be met, or upon how many or when troops are to be sent to the western front. But these are things which are being discussed. What is being done is to send over within a week or two Red Cross Units and physicians unattached to any units. Why is this being done and the other still under discussion? The answer is simple if we put the facts in a form familiar to us. Any one of us would be fairly busy if he had six or twelve accident cases on his hands in one day. But what is that compared to what is happening on the western front at the present time? The cry is for doctors and more doctors, don't forget that. Every one of us will be needed but only the chosen few can go. Recently a call came from the War Department for thirty or more doctors from Michigan who are to go in squads of ten. Presumably other states are being called upon to send their quota so that the total will be considerable. But mark you the terms of the call and think of the humiliation of some of us. They do not ask for those grown old in experience, those who consider themselves among the top-notchers; not at all. They stipulate that only the youngsters in the medical profession, men between twenty-five and thirty-five will be accepted. While the age limits of the compulsory military service bill have not been definitely decided upon, the maximum age will probably not be more than thirty-five. So far as I am able to judge, those who are running this war game seem to be playing favorites, backing the young men and politely saying to some of us that we may possibly be called on later; they will see. But they have thrown a sop to those above thirty-five so far as the Medical Officers' Reserve Corps is concerned. If you are physically and mentally qualified and your habits are good, you can be enrolled in the Reserve Corps up to the age of fifty-five. They don't promise you will be called to active duty. It is even hinted that

those called for active field duty will be forty-five or under, but they don't take away all hope for they will enroll you up to the age stated.

Thus the first question is answered. *You are needed, and needed badly if you can get in.* At least if you are fifty-five or under you can try. If you can not pass the physical examination, you will have the consolation that you have responded to the call and have demonstrated your willingness to serve. For it must not be forgotten that there will be no need of conscription so far as the medical profession is concerned. That is my opinion at the present time and I hope I shall not be obliged to change that opinion. It has been estimated that an army of two million men will necessitate a medical corps of between fifteen and twenty thousand. *Upon that basis Michigan will have to furnish approximately six hundred physicians. This will mean more than one-quarter of the membership of this Society* if we exclude the physicians already enrolled in the Red Cross Sections and other medical divisions of the Army and Navy. I feel sure that the reason so few relatively have sent in applications for the Reserve Corps is that they have not been certain that they were really needed. One of the principal purposes of this meeting is to disabuse your minds of that fact. I for one have no fear but what the medical profession of Michigan will respond to the call. Her past history demonstrates that there have been few slackers in our midst. Let us show the people of this State and the country at large the stuff that is in us. Do not let us hold back and try to delude ourselves by saying that we will send in an application for the Reserve Corps later on when perhaps we will be needed. *The War Department wants you now so that it can definitely know what it can depend on.* Let us hope it will not be necessary to adopt the English system in this country where it is decided whether a medical man shall or shall not join the colors through a tribunal. We want to see no compulsion in our profession. We would rather see so many Michigan physicians making application for the Reserve Corps that a tribunal would be necessary to compel some of them to remain at home in the interests of the civil population.

The old Medical Reserve Corps of the Army goes out of existence June 2 next, its place being taken by the Medical Officers' Reserve Corps which differs from the old organization in that no choice is given officers of this Corps



as to whether they will or will not respond to a call to duty in case of war. In other words it is a true reserve in which the medical officers are commissioned for five years and through the acceptance of their commissions and their oaths of allegiance, bind themselves to respond to the call of active duty during that period. This answers many questions about the length of service for Medical Reserve officers. Practically it means enrollment for the duration of the war, since after the cessation of hostilities the Medical Reserve Officer would be retired to the inactive list, still subject to call until the expiration of his term of service.

When on active duty the Medical Reserve officer receives the pay and emoluments of officers in the regular army service. For example, the large majority of civilian physicians will be enrolled in the Reserve Corps as first lieutenants. They will receive a salary of \$2,000 a year with quarters and certain other allowances, such as traveling expenses, etc. They must provide their uniforms and pay their share of the expenses of the mess, but, since food is obtained at wholesale prices, the estimated expenses will probably not be more than seventy-five cents or a dollar a day. I have gone somewhat into detail regarding these matters since it is of vital importance for the applicant to know how much he can depend upon for the support of his family in case he goes on active duty. And that naturally leads to the consideration of another matter equally important, the duty of the physicians remaining in civil life toward the Medical Officer on active duty. Although there will not be many chances to spend money at the front it does not require much calculation to see that the Medical Reserve Officer will not grow rich out of his salary and that it will be practically impossible for him to provide for his family out of his salary as well as if he were in active professional work at home. While a man's first duty, no doubt, is to his country in her time of need, it is too much to expect that he will see those dependent upon him suffer. And that is where each one of us at this meeting can help. It will devolve upon us on this occasion to evolve some practical scheme whereby the practice of the doctor at the front can be taken care of by his colleagues, so that his family will have a certain income over and above what he is able to save out of his salary.

I have purposely used the words "taken care of" which have never failed to call forth a smile. "Surely," someone remarks, "there will

be no trouble about that; the absent one's practice will be so thoroughly taken care of that he will not recognize it when he returns." But is not that cynical remark called forth more by what used to exist in the medical profession than is the case today? Those of us who have been privileged to observe the trend of medical affairs in Michigan during the past twenty-five years can testify to the great improvement in the relations of medical men with each other. Twenty-five years ago it would have been utterly impossible to have formed auxiliary medical defense committees in the different counties in the State. Not so long ago it was thought absolutely essential for each physician to form himself into a committee of one for defensive purposes. He felt sure that, he himself being chairman, secretary and the remainder of the committee, there would be perfect harmony which in itself would be advantageous in his defensive work. I have talked over this question with scores of the members of the Society and the majority think that it is quite possible to work out a practical scheme for the accomplishment of the purpose we have in mind. To the doubters I have put this question. "Would you not be willing to attend the patients of a colleague at the front and turn over a certain proportion of the professional fees to a committee of doctors of your county for the benefit of your absent colleague's family?" The answer has invariably been, "Yes." In some instances, however, they seemed to doubt whether the other fellow would do this. At any rate, it would be an interesting experiment and in my opinion should be tried.

It would seem as if universal service is most likely to be worked out in this country, not only universal military service, but service of all kinds, and that after all is what we all of us want. We have heard how much depends upon the efforts of the farmer if we are to feed the allies as well as ourselves. The same effort will be required of each and every one of us whether we be at the front or at home. Gone are the days when it was no crime to take one's ease. Pray God those days may come again but, until the business in hand is settled, there can be no leisure for any of us. We have much to do and it must be done quickly and efficiently. Let each man search his own soul and then decide what part he shall take in the struggle. We can not tell how long this war will last but each one of us can soon ascertain what part in the conflict he will enlist for. Decide now or you may lose your chance and

your place be filled by a stronger and better man. Above everything else, let us show what the medical profession of Michigan can and will do.

Chairman: We have with us a representative of the Army, and I have pleasure in introducing to you Lieut. Colonel Angus McLean, head of the Harper Hospital Base.

DR. MCLEAN: There has been considerable said here in regard to patriotism—the medical profession in Michigan does not need to be reminded of their obligation and duty—they have responded to the calls made upon them in perfect keeping with the character of their self-sacrificing service, and there is no state in the Union that has sent in more applications for this work than Michigan.

There has been something said about the Red Cross. These people who go into these base hospitals, called Red Cross units, are not lagging behind, but are right in the forefront. When you are in this, you must know that it is a part of the United States, and you are under orders of the Surgeon General and under the officers, and can be sent anywhere at any time. You are subject to as much danger as anybody else.

There has been an idea prevalent that a physician is more immune from danger because of his work—that they are located in the safety zone—but the facts are, according to the reports given, that there were more physicians killed and wounded than any other set of men in the army.

The first record we have of any medical service was in the old Roman period when they had men, non-commissioned officers who had not only to fight, but to treat their fellow men. At that time they were called *duparia*—they fought double—if they did well, they were put on double rations.

The first we know of in history about first aid in war was in the Grecian wars. These people were paid for their services—every person that was wounded, and they succeeded in saving, they were paid so much a piece, and from that emanated the First Aid Corps.

Now when you wish to get into the Medical section of the Reserve Corps, your name will be sent to Washington, you must be examined physically and mentally before a competent Board—there are two in this State, one at Detroit and one at Marquette. To facilitate matters, and save trouble and expense, we brought the Board out with us, and this Board will examine any who desire to take the tests.

There has been something said about age—I think there are more volunteers above than young fellows below. And it will not be very long before these men along about 35 will be called upon—maybe not across the water, but for some home duty, and there will be a place for most everyone.

The physical examination and mental examination are not severe—the majority pass—they waive color blindness—they are not strict on the matter of sight as in the signal corps; waive also on slight hernia, etc. There is room for everybody and everyone who enters I feel sure will be treated well. But don't go into the thing thinking you will have a play-spell—there is work, hard work, exposure,

danger. The Government expects that every man will do just what he is told to do and go just where he is told to go.

I think that the most of these units that are now forming will go abroad. Some say, "When the fellows come over here I will sacrifice everything, even to the giving of the last drop of blood." But a good many think that it will pay better to save the first drop of blood in France.

The records show that the applications from Michigan are as great as from any other state, and there is no less enthusiasm in the medical profession than in any other profession.

Chairman: The examination is appointed to be held at Dr. Haughey's office.

We have with us a gentleman who does not have to say "Go"—but he says "Come." I have pleasure in introducing Lieut. Col. Burt R. Shurley.

COL. SHURLEY: Mr. Chairman, Members of the Medical Profession: I stand here before you by virtue of a very great privilege, and that is, of being born on the fourth of July. I have never been quite able to get over it. And I want to say that I am sure that every member of the medical profession here will, if he does not at the present time, feel as though he were born on the fourth of July.

It has been a great privilege to represent the Red Cross Society. The American Red Cross Society is but a part of the great organization that was founded at Geneva at the Convention in 1863, and in America it is divided into three departments—the division of war relief, the division of civilian relief and then there are branches or chapters in all the large cities, ready to act on a moment's notice.

And now that the Red Cross flag has been fired upon for the first time in the history of nations; our hospital ships have been sunk; our trained nurses have been slaughtered; and the medical men that we have sent under that flag have been killed, something that has never before been done in the history of Christian nations, it seems to me that this call to enlist under the Red Cross flag is as great as the call to our fathers when Ft. Sumpter was fired upon in years gone by. And now as we rally around the Red Cross flag, with its base hospitals, with its ambulance companies, with its sanitary squads who serve that flag with Old Glory, I am sure that again the country will be proud of its medical profession as it has been in the past.

And so the organization of the base hospitals has been added as a prophylactic measure—a very necessary measure work of the army. If you could have been with me in the South at the time of the Spanish American war, and seen the flower of this land—3,000 men in a camp of 50,000 soldiers stricken with typhoid fever because of the lack of proper sanitary methods, because we did not exercise that scientific knowledge which we have today, you would appreciate the value of the service that is rendered by the Red Cross, not only to save those who are wounded on the battlefields, but also to prevent the awful slaughter from sickness and disease which has devastated our ranks of soldiers.

So I could say, organize your sanitary units under the Red Cross and form your Ambulance



Corps to join the base hospitals—each of these requiring in nurses, doctors and other helpers 150, and do all the work they are called upon to do at a distance of twenty miles back of the line.

This work in Europe has been marvelously successful, and the Red Cross work fills in the gap as nothing else has ever done. Our regimental surgeons are well supplied and eminently qualified; our civic and military hospitals are well equipped, but the gap in between that has existed in years past is now filled by the Red Cross. So I say that we will never regret entering enthusiastically into this Red Cross work, give it our support, rally around this flag, for it has a place in this great economy of alleviating human suffering that can not be estimated. (Applause).

Chairman: Now we come the most serious part—how shall those who are left behind be cared for. I will call upon Dr. J. W. Kay, of Lapeer, who will give his report:

THE CONSERVATION OF THE PRACTICES AND INTERESTS  
OF THE MEMBERS OF THE MICHIGAN STATE MEDICAL SOCIETY WHO ENTER THE MEDICAL  
SERVICES OF THE UNITED STATES  
ARMY AND NAVY.

1. The Michigan State Medical Society tenders to and assures every physician who is a member of this organization that upon his entrance into the service of the United States, each member will have the collective and individual support and assistance of this organization and its members in the protection of his practice and interests during the period of his Army and Navy service. That upon his return to his respective communities the Michigan State Medical Society will, through its officers, Council and Members, exercise and extend to him its like influence in causing and aiding him to reconstruct his practice.

2. That the Michigan State Medical Society through its officers and Council shall cause to be appointed by its component County Societies, a Committee that is to be known as the County Medical Society Patriotic Committee. That these committees shall be charged with the responsibility of familiarizing themselves with the comforts and circumstances of each enlisted member's family and dependents. That from time to time, as needs may be, these Committees shall assure themselves that the family and dependents of the member in service are existing in comfortable circumstances and are not undergoing any hardships. Further, that this Committee shall file with the Secretary of the State Society a list of the families and dependents of members who have enlisted and are in active service and that they shall report monthly to the State Secretary the condition of each member's family and dependents.

3. That the Council's Finance Committee is hereby authorized to spread such assessments as may be necessary to create and maintain an Emergency Fund. That in the spreading of such assessments members who are in actual service shall be exempted. The Financial Committee is hereby authorized to disburse this fund as required, upon the recommendation of County Patriotic Committees and in its judgment, to protect the interests,

wants or actual requirements of the families or dependents of our members who are in actual service in the Army and Navy.

4. That the Council is authorized to draw upon the funds of the Society for disbursement by the Council's Finance Committee for the purpose of rendering prompt and immediate relief to any member or his dependents should they be in want or require special relief measures.

5. The Council is authorized to supervise and direct methods of relief and the means for accomplishing the protection of enlisted members' families and interests.

Chairman: If you desire the report as it is, adopt it; if you desire a further consideration of it, indicate it.

Dr. Burkhart: I move that the report be adopted as read. Seconded, and carried unanimously.

Chairman: Are there any resolutions to be presented before we close?

DR. GARRER: I want to present a resolution. I think one of the greatest hardships to come to the fellow who is anxious and willing to serve, is to be told he is beyond the age limit. I do not think that any physician gets beyond the age when he is ready to strike a blow for his country. The medical journals and Preparedness Board have been asking our young men who are now in school or are contemplating a course of training to remain—they are in the hotbeds of enthusiasm—and so I desire to present the following resolution:

"Inasmuch as the *Journal of the American Medical Association* through its editorial columns and the Board of National Defense through its Medical section is urging all medical and premedical students to continue their studies, and since to do so will be to subject a large class of enthusiastic and patriotic young men to the possible opprobrium of "coward" and "slacker," Therefore be it Resolved, That the Michigan State Medical Society in special session assembled does hereby urge upon 'The General Medical Board of National Defense' that a way be devised whereby all medical students or those about to enter medicine shall be recognized as being in their country's service and that some insignia so designating them shall be given them. Be it further resolved that the Secretary of the Society be instructed to inform the Chairman of the Board, Dr. Franklin H. Martin, of the action of this Society at once."

I think it is very desirable to have this passed. They all want to go, and they have been told repeatedly that it is their duty to stay. On the other hand, from this insignia that has been ordered by the government, it should be a great help. I hope this resolution passes.

DR. KING: As I understand this resolution, those that are going to be students, as well as those who are students—this will give them a chance to become a slacker—therefore I think that part should be stricken out.

DR. GARBER: There are a lot of young men who have made up all their preliminary work, all ready to enter upon their course of special training—these are the men that we want in reservation. So I think that part of the resolution is all right.

Chairman: We have with us Dr. Alexander R. Craig, of Chicago, Secretary of the American Medical Association.

DR. CRAIG: It is a pleasure always to meet with you for there is always something that makes me feel as though things were being done. You Michigan men have a happy faculty of putting your finger on the right thing and doing it.

And now I plead guilty to something—I want these hundreds of men who have made formal applications for commissions in the various corps, and also every member of the Michigan State Medical Society, as well as every member of every other State Medical Association, that they will pledge themselves to give their support to the federal government anywhere the federal government needs them.

In making this request I know I have transcended

the authority of the Medical Association, but when the House of Delegates meet, I am sure they will endorse the action I have taken in your name of all the State Medical Associations.

And now, if I may be pardoned for suggesting a way out of the difficulty that is thought to be involved in the resolution just passed, that every man who is given his insignia shall by his accepting it, pledge himself, and make himself in honor bound to make application for a place in the Reserve Corps—it may not be in the Medical Corps—but wherever it may be, and then if the Government needs them they will be willing to join the Medical Corps of the Army or Navy to serve their country whenever and wherever their country needs them.

A vote on the question of the resolution resulted in its being carried unanimously.

There being no further business, the Society adjourned, joining with Dr. Ostrander in singing America.

A. P. BIDDLE, President.

F. C. WARNSHUIS, Secretary.

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\*Members of the Executive Committee of the General Medical Board.



## Original Articles

### CIRCUMSCRIBED CYSTIC MENINGITIS —REPORT OF THREE CASES.

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AND

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DETROIT, MICH.

Circumscribed cystic meningitis is the designation that has been given to an affection of the coverings of the cord and brain, evidently occurring quite frequently, and is a lesion concerning which there is not, as yet, an overabundance of literature. Not a few other names have been applied to the lesion, instances of which are meningitis serosa circumscripta, hydrocephalus meningeus, arachnoid cysts and arachnoiditis adhesiva circumscripta. That the names are more or less arbitrarily chosen is evidenced by their multiplicity and a perusal of a description of the lesion.

The lesion, as has been described by various writers, and there has been a remarkable unanimity of the picturization as well as in the cases with which this paper is concerned, consists of a collection of fluid within the dura, surrounded by a quite definite delimiting membrane usually of extreme thinness. The limiting membrane undoubtedly is from the arachnoid or pia-arachnoid. The lesions occur in any region and they give rise to symptoms practically identical with tumors of the cord.

The first instance of this condition to be described was that of Spiller, Musser and Martin (1) in 1903. In an admirable paper they gave a most vivid picture of a cystic condition occurring in the arachnoid which was diagnosed as tumor of the cord, and upon exposure and evacuation resulted in an almost complete cure which was of long duration.

Subsequent to this publication there appeared several articles dealing with the same subject and bringing to light many cases of circumscribed meningitis. Krause (2) was able to collect eleven cases from his own records, Horsley (3) reported twenty-one cases as such, though the correctness of the classification of some cases in his series has been questioned. Smaller numbers have been described by Oppenheim (4), Bruns (5), de Montet (6), Mendel and Adler (7), Bliss (8), Weisenburg and Müller (9), Munro (10), Mills (11), Skoog (12) and Hanes and Willis (13). Schlesinger (14) described the postmortem findings in a case dying from an intercurrent complication,

of what he termed meningues, which evidently was an example of the disease here described or very closely related to it.

However, many instances of the rapidly growing list of cases have not passed unchallenged. Skoog (15) in a paper in 1915, reviews the literature and discards all but four cases as instances of cystic meningitis, and adds two that he himself reports in his paper. Granting the case of Hanes and Willis to be one true to type, there would have been but seven cases in the literature preceding our paper. He does not give a definition or a definite pathological picture, and it naturally follows that the fair minded reader cannot wholly accept his sweeping exclusion of all but four examples previous to his own addition. Although we feel that Skoog has been entirely too radical in ruling out all but a few cases, nevertheless there are some that have been described as cystic meningitis that do not appear to conform to our conception of the lesion. Before discussing other interesting phases of this lesion, our cases will be presented as briefly as is feasible with clearness.

#### CASE REPORTS.

Mrs. A. S. aet. 46, was admitted to the medical service of Harper Hospital, complaining of weakness of both legs and inability to walk. The patient was of Hungarian extraction. The family history was not obtained and her childhood history was of no importance. In 1911 while still living in Hungary, she developed bladder disturbances for which she was treated with irrigations. One year later her right kidney was removed in Budapest with apparent cure of the condition for which she had suffered.

In February, 1914, she fell upon the ice, striking her back and right shoulder, with no apparent local injury. However, she developed pain in the region of the bladder which came on at intervals. During the past summer she developed severe pain in her right arm, right neck and back, being confined to bed for seven weeks with this pain.

The present illness began three weeks before admission with a sudden onset of weakness in both legs and trouble in walking. The condition progressed rapidly and for the past few days her legs have been paralyzed. During this time she has been troubled with nocturia and frequency of micturition, and occasionally edema of both ankles. The general physical examination revealed some impairment of both apices. There was nothing else of importance. The neuro muscular examination showed marked weakness of both legs, spasticity and a left facial paralysis. She was unable to stand on her feet. The knee jerks were exaggerated. Babinski was positive in both legs. There were no sphincter disturbances. The pupils reacted normally to light and accommodation; fundi were normal. Tactile and pain sensations were impaired in all regions supplied by the segments of the cord below

the tenth dorsal vertebrae. Formication was also marked over these regions. In the regions supplied by the tenth to fifth segments, there was hyperesthesia. The urine was negative. The Wassermann reaction was negative.

While in the hospital, the patient developed an abscess of the left anterior chest wall over the fifth to sixth chondro costal articulations. This was incised and drained. It was tuberculous.

While the possibility of the cord tumor had been in the foreground as a cause of the spinal trouble, doubt was engendered by this complication, and accordingly a thorough search of the plates of the spine was done. However, the vertebrae and ribs were apparently normal and no signs of a tuberculous focus were made out.

*Diagnosis.*—The final diagnosis was tumor of the cord and as the symptoms were progressing, a laminectomy was decided upon.

*Operation July 10, 1915.*—Ether. The dura was exposed at the level of the eighth to eleventh dorsal vertebrae. The dura did not pulsate. A very definite elevation, evidently the outline of a mass beneath, making a dura very tense. Upon incision of the dura, a bag of fluid presented, its base being attached to the arachnoid. The cyst measured 5 cm. in length by 1.5 cm. in width, and lay over the ninth and tenth dorsal segments. The free surface of the sac wall was very thin, while at its base in the arachnoid it was considerably thickened. On opening the sac, clear fluid escaped under pressure and the walls collapsed. There was considerable matting of the pia-arachnoid about the nerve roots coming off from the involved segments. The walls of the sac were removed almost completely. The pial veins below the growth were markedly congested. The wound was closed in layers, two gutta percha drains were laid, one in each angle of the wound down to the deep muscles. The patient had no untoward incidents, either from the anesthetic or the operation. The healing was per primam.

Improvement was slow but noticeable, for on July 13, 1915, movement of the legs was much more free and her general condition was excellent, although she complained of pains in her legs.

In November, 1915, the sinus under the breast was excised and the sixth costal cartilage curetted. Aside from this, the improvement has been steady since the laminectomy, and when seen Feb. 26, 1917, was in good health. She walked normally, had no disturbances of sensation nor no root pains. The reflexes were normal. She maintained she was as well as she appeared.

*CASE II.* Mr. F. J. S. white, aet. 26, was admitted to Harper Hospital May 26, 1915. His complaint was "epileptic fits." The family history is not of interest. He had none of the childhood diseases. Fifteen years previous to this date he had been struck on the head(?). He was a victim of a gasoline stove explosion twelve years previous in which he was burned on the neck and right arm, and was disabled for six weeks.

The present illness began fifteen years before when he was attending St. Francis Orphan Asylum where he was punished by being struck on the palm of the hand with a switch. Following this he had an epileptic attack. Since then he has been subject

to attacks of from two to three each month until within the last four years, during which time he has had several each month. He thinks that his memory is failing. The attacks are preceded by dizziness, then the right half of his face becomes stiff, then the right arm, then the right leg. He bites the tongue. There was no incontinence of urine or feces during the attack. He lost consciousness during the attack.

Physical examination disclosed nothing of importance except the neuro-muscular condition. He walked with a limp. Right arm and leg were weak and much smaller than the left. There was a very marked tremor involving the right half of the body. The tremor was continuous. There was no evidence of bony deformity of the skull, and a Roentgen examination was impossible owing to the tremor. Wassermann was negative.

Due chiefly to the patient's insistence, an exploratory craniotomy was decided upon with the hope that a removable irritative lesion might be found. An osteoplastic flap was turned down in the left parietal region and the dura exposed over the motor region. There was circular bulging of the dura 4 cm. in diameter, lying over the motor area. Upon opening the dura, the bulging was seen to be due to a thin walled collection of clear fluid surrounded by a thin membrane. Upon decision several drachms of clear fluid escaped under considerable pressure. The base of the cyst was in the pia arachnoid. The cortex surrounding this area showed a flattening of the convolutions and ischaemia. A portion of the dural wall of the sac was excised and the dura partially closed. Recovery from the anesthetic and operation was uneventful.

The tremor disappeared for about ten days, then returned but was not so marked and at the present time, twenty-two months after the operation, it is much less in severity. There has not been an epileptic much stronger and he now works every day.

*CASE III.* Mrs. T. F. aet. 36, was admitted to Harper Hospital July 11, 1916, complaining of "paralysis of the legs." The family history was not significant and aside from childhood diseases, including diphtheria, she had enjoyed perfect health until the beginning of the present illness. The trouble began ten years ago when she noticed that her legs were growing weak. She was unable to stand up as long as usual and became extremely tired. The weakness gradually progressed and in a year or two she was forced to use a cane to walk. Five years ago she became so weak that it was only with the aid of two sticks that she could get about at all. For the past year she has been bedridden, movement of her legs being extremely slight. She has been markedly constipated and is forced to strain considerably in micturition. At no time had there been pain in her legs but she had noticed that for some time she had much less keen sensation of pain of the skin and had a marked loss of muscle sensibility. The physical examination elicited nothing of importance except in the neuro-muscular domain.

*Neurological Examination.*—The patient was lying in bed and was unable to change position without assistance. The paralysis was spastic. There was no apparent wasting of the legs. There was no tremor. The pupils were normal and pupillary re-



flexes were normal. Fundi were normal. There was a slow lateral nystagmus. Reflexes: There was a double positive Babinsky. The knee jerk was greatly exaggerated in both legs. Plantar stimulation caused clonus of each leg. Sensation: Pain, temperature and touch sensations were absent or greatly diminished anteriorly and posteriorly below the level of the eleventh dorsal spine. There was marked constipation and great difficulty in emptying the bladder. A diagnosis of tumor of the cord was registered and a laminectomy decided upon.

*Operation July 18, 1916.*—Ether. The spines of the eight to the twelfth dorsal vertebrae were removed and the dura exposed. The dura bulged into the wound and did not pulsate. The dura was incised and there was disclosed a fusiform cystic mass which enveloped the cord for a distance of 6 cm. The mass consisted of a thin membrane, evidently from the pia arachnoid and was filled with clear fluid under tension. On puncture several ccm. of clear yellowish fluid escaped. There was no spinal fluid observed except in the sac. The cord under the sac showed evidence of pressure and the pial veins below the sac were tortuous and large. A probe inserted above this region encountered no obstruction. The recovery from the ether and operation was without incident. She was discharged from the hospital August 4, 1916 with her condition unchanged.

One month after discharge from the hospital, a report from the family physician told of slight improvement. There had been a return to some extent of sensation. She had developed an involuntary tremor or "dancing" of the legs. On Oct. 26, 1916, the communication showed that she could move the toes freely, and although her legs would not support her, with aid she could get about and had power to put one foot before the other. In the last report of January, 1917, she could walk with the aid of a cane. Sensation had greatly improved and the general condition was excellent.

We feel that these cases conform very closely to the types of cases of circumscribed cystic meningitis that have been described. In all of these the most prominent pathological feature has been a collection of fluid in a thin membrane, compressing the cord or brain and on puncture the sac collapsed.

If one may venture an opinion as to Skoog's criteria of this lesion, it would seem from his paper that the lesion is a cyst definitely arising from the pia-arachnoid and that secondary changes in the surrounding membranes and cord were absent or of minor importance. If our inference is correct, then our cases may not fulfill all requirements necessary to place them as true examples of circumscribed meningitis.

A cyst is defined as a sharply limited and abnormal collection of fluid in any area unprovided with a channel of outflow. (15) Our cases most decidedly conform to such a definition and there is no reason to believe but that the term "meningitis" is well taken, for in

many of these cases, the cystic formation may be the result of encapsulated hemorrhage or inflammatory products.

It is true that in reading over some of the operative descriptions that the impression is given that the collection of fluid is not circumscribed nor cystic but apparently is from a cul-de-sac above or below a certain lesion or membrane, and no doubt there are many instances of rupture of an unrecognized membrane of extreme thinness. Our cases gave no evidence of cystic degeneration of tumors or being of parasitic origin.

It will be noted that in Case II of this group, the lesion occurred in the coverings of the brain. The great majority have occurred in the course of the cord covering although Krause described one instance of a cerebellar lesion which he felt convinced was of this type.

In all of our cases there was marked improvement from complete relief of the neurological signs in Case I to great improvement which continues at the present time. It is a remarkable fact that in practically every treated case on record that where operation was performed there has been no evidence of recurrence, and in most of them more or less improvement.

As to the etiology of circumscribed cystic meningitis, nothing but conjecture can be advanced. Cysticerci and echinococcus are of fairly frequent occurrence in the cord and brain and their coverings but, as a rule, give evidence of the parasites elsewhere and the parasitic cysts generally are multiple. Sir Victor Horsley believed that syphilis was the underlying agent in many of his cases and the gonococcus in others. Tuberculosis has been advanced as the cause in some instances but no very satisfactory evidence has been shown in these cases.

Injury has a great many advocates and it seems to the writers that there is a great deal to be said in its favor as a cause. It seems most reasonable that the inflammatory adhesions with the subsequent softening of liquification of the products of inflammation could give rise to the condition described.

The symptoms of this lesion are practically those of extra medullary tumor. Horsley advanced some differential points but these have been disputed. Neuralgic pains have been absent or not marked in our two cases of affection of the cord membranes. The spinal fluid withdrawn by puncture may give some significant data (Hanes and Willis) (17). These writers found in their case a marked protein excess.

xanthochromia with a low cell count, concerning which syndrome Hanes (18) has published an article and we quote his conclusions.

1. Compression of the spinal cord and its meninges from whatsoever cause leads to the formation of a cul-de-sac, more or less complete, distal to the site of compression. This leads to characteristic changes in the spinal fluid.

2. The earliest characteristic change has been described by Nonne as an increase of proteid without cell increase.

3. As the condition of cord compression persists, the fluid gradually becomes yellow in color, the procontent increases enormously, and the fluid, when removed, coagulates spontaneously (Froin's syndrome). Pletocytosis may or may not be present, depending upon whether or not the meninges are inflamed by the pathological process causing the compression.

4. Xanthochromia of the spinal fluid must be distinguished from staining of the fluid by hemoglobin derivatives.

5. The spinal fluid syndrome of Nonne-Froin is very helpful and reliable in the diagnosis of spinal cord lesions. When present it always indicates a compressive lesion of the spinal cord.

It is regretted that the spinal fluids were not studied in these cases. Suffice to say, that in all probability the lesion cannot be differentiated pre-operative from extra medullary tumor of the cord.

The prognosis would seem fairly well established, namely more or less rapid progression to a fatal end. This view would naturally bring up the question again of the character of the cyst. If lined by endothelium, it would be self explanatory of the way in which it carried out the destruction, that is to say by reason of growth from secretion. However, if of inflammatory origin and with a limiting membrane of organized adhesions, there would not appear any reason for an increase in size and one would look elsewhere for an explanation of the terrific damage done by a moderate sized cyst, namely inflammatory changes induced by it acting as a foreign body, and causing edema and thickening of the surrounding structures and an increase of pressure.

The treatment is most clearly indicated by the brilliant results obtained with these cases in the past, namely laminectomy and evacuation. It occurs to the writers to add their emphasis to the opinions of many others who advocate early exploratory operation for pressure symptoms of the cord. Horsley (19) had made it a rule to operate on such cases as soon as anti-luetic treatment had been demonstrated to be of no value. This would seem to be a most safe way to handle this disease, for time

alone, aside from increase in pressure, may bring about irreparable damage to the cord tracts. Horsley advocates evacuation and irrigation of the canal with a weak solution of corrosive sublimate.

Laminectomy in experienced hands is far from a stupendous procedure and offers the only opportunity for alleviation and very often complete cure.

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#### THE INCIDENCE OF GOITRE AMONG FOUR HUNDRED AND TWENTY- FIVE WOMEN AT THE NEW- BERRY (MICH) STATE HOSPITAL.

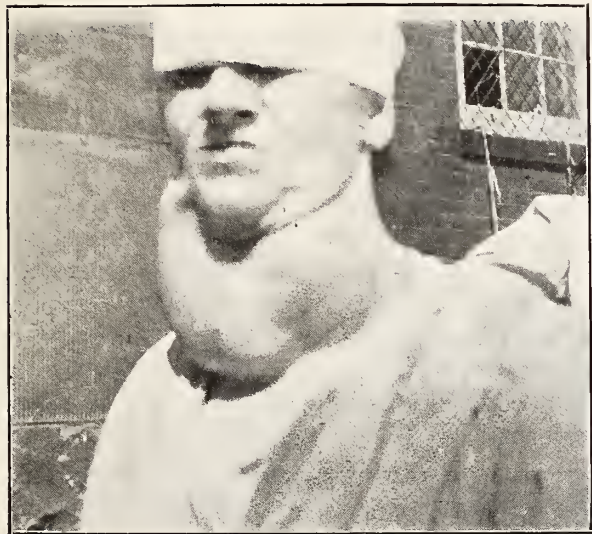
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Goitre is comparatively a rare disease in the United States, but it is quite prevalent in a few districts, one of which is Northern Michigan. Dock (1) states that goitre is found in all parts of Michigan, but particularly in the northern section.

The geographical distribution of goitre is very interesting. The occurrence of goitre is known to antedate the Christian era, and that the disease abounded among the Alps was known to the ancients. The disease was also described by the Romans. It is associated in a striking manner with mountainous countries. It has been reported (Hirsch 2) that a great zone of goitre begins in Mexico and extends with increasing intensity through Central America and South America as far as



Chili. The distribution of goitre in the United States is of particular interest to us. There were parts of New England, New York, Alabama, and Virginia in which goitre prevailed a hundred or more years ago, but where it no longer exists. For instance, it is amazing to read (Barton 3) that in 1798 in Pittsburg, out of 1,500 inhabitants, no less than 150 had



One of the cases of extreme enlargement of the thyroid gland.

the disease. However, the number of cases gradually declined and no new cases occurred after 1806.

It is a fortunate circumstance that has caused the decline of goitre in certain regions in the United States, for it is stated that in Europe goitre has about the same prevalence as it had one hundred years ago.

It has been observed in Europe that drinking water from certain springs in goitre regions will produce goitre. Those who drank from the springs developed goitre, and those who did not, remained free from it. There are said to be wells to which young men wishing to avoid enlistment resort. In a few weeks goitres develop which are large enough to exempt them from military service.

At the Kingston Insane Asylum, in the Province of Ontario, Canada, Osler (5) mentions the extraordinary prevalence of goitre where in 1893 there were 228 cases of goitre among 600 patients. It was found that the patients developed goitre when the St. Lawrence River water was substituted for well water. The reverse has been true of some Michigan towns—that the disease has decreased when lake water was used instead of well water. (Dock). Recent observation in goitre

in Michigan were made by Dock, who found that it prevailed in all sections, particularly in the northern section. The Indians who preceded the civilized inhabitants along the southern shore of Lake Superior used melted snow for drinking water during the winter months, and the goitre which was common among them was attributed to drinking "snow-water." However, all recent investigation tends to show that the infectious agent is conveyed through the drinking water; and behind the water the cause is said to lie in the geologic formation.

M. Wilms (6), who carried on some experiments in Europe, gave some rats water from a goitre spring, and found that the disease was produced by the water either filtered through a Berkfeld filter, or unfiltered. One of the most interesting facts that has been brought out is in regard to the dialysis of water. Gouget (7) dialyzed water from a goitre spring and found that the substance which remained on the dialyzer produced goitre.

The Newberry State Hospital is situated in the Northern Peninsula of Michigan, where goitre is prevalent. The patients examined for



this report were all resident at the Newberry State Hospital at the time, but came from various parts of the Upper Peninsula. We may, therefore, regard all the cases as the endemic type. In Northern Michigan the towns are very progressive and practically all the settlements of a few hundred people have a town water-works system. Generalized obser-

vations are not very enlightening, as here the entire population drinks water from the same source and some are afflicted with goitre, while others are not.<sup>1</sup>

The water supply at the Newberry State Hospital is from three wells, the deepest of which is 457 feet. The pipes go down through about one hundred feet of sand, then two hundred twenty feet of gravel and boulders, to a lime rock ledge. The lime rock has many natural cervices in which the water is found. The temperature of the water as it comes up from the wells is 47 degrees or 48 degrees F. This is unusually low for water from this depth and experts who have examined the wells concluded that the water seeps downward from three large marshes, each of which is only a few miles distant from the hospital, and is collected in the fissures of the lime rock ledge.

Women are supposed to have goitre much more commonly than men.<sup>2</sup> In this locality, however, men are very frequently afflicted with it. In our neighborhood there have been a few huge thyroids observed among men, and numerous ones of moderate enlargement. The lower animals in this region contract goitre occasionally. It is comparatively common among dogs and is occasionally found in horses and cows.<sup>3</sup>

In considering goitre among the women patients at the Newberry State Hospital, observations were made from two standpoints:

1. Thyroids of the 425 women here at present were examined by palpation and measurement.
2. Condition of the thyroid gland of new patients admitted was noted for a period of six years.

## PART I.

### THE EXAMINATION OF ALL WOMEN PATIENTS FOR THYROID DISEASE.

The facts in regard to the 425 women patients here at present are as follows:

Four hundred and twenty-five cases were examined for enlargement of the thyroid gland. The gland was found enlarged in 119 cases or more than 25 per cent. There was no enlarge-

ment in 306. The pulse was counted in all cases and eyes observed for any prominence and there was no instance of exophthalmic goitre in the series. Duration of the disease was very long in some of the cases, as several of the patients were admitted in 1896 with marked goitre at the time of admission. Some were admitted in every year since then; so, of the 119 patients at the Newberry State Hospital who have goitre, forty-five had it when they came. In forty-eight cases no observation was made about it when they were admitted. (Only in the last eight years, has the physical examination included the examination of the thyroid gland.) Twenty-five women who are still living here have developed goitre here from 1896 to 1917. As the population is that of the average hospital, and so constantly changing on account of recoveries or fatal terminations, it is probable goitre developed in women who have been discharged during the twenty years from 1896 to 1917. Of course, it is impossible to include these cases in this report.

Tabulated, the facts are as follows:

Thyroid normal on admission ..	306
Thyroid enlarged on admission..	45
Developed since admission .....	25
Cases here, antedating six year period .....	49
	<hr/> 425

It is noteworthy that several cases which were quite pronounced at the time of admission have improved without treatment and the glands are now about normal. The ages of the patients show the greater number of cases between 30 and 40 years. The ages were as follows:

### Ages of patients with goitre:

15-20 .....	1
21-30 .....	15
31-40 .....	37
41-50 .....	28
51-60 .....	26
61-70 .....	11
71-75 .....	1

Total .....119

In regard to previous residence forty-eight of the 119 cases came from two counties where goitre seems to be unusually common: Houghton and Marquette counties. A very large proportion of the patients at this hospital are foreign born, therefore the following table may be of interest.

1. Of one thriving little city it is said, "nearly everyone has goitre," and the physicians there advise boiling the drinking water. Water heated to 80° C. is said to be freed from the infectious agents of this disease.

2. Of forty-five women nurses employed here, twenty-three, (or 50 per cent.) have noticeable enlargement of the thyroid.

3. Several congenital cases have been observed in the calves of the herd at this hospital. The enlargement noticed at birth decreases and is usually gone after a few months. One case has persisted for six months.



Nativity of patients with goitre:

United States .....	42
(Including four Indians)	
Finland .....	15
Sweden .....	15
Canada .....	13
Italy .....	7
Germany .....	6
Norway .....	5
Austria .....	5
Denmark .....	3
England, Ireland (each two) ..	4
Hungary and Belgium (each one)	2
Poland .....	2
<hr/>	
Total .....	119

or

Foreign born .....	77
American born .....	42

The patients were nearly all from the poorer and uneducated class. Many of them were unable to speak English. In general, the physical condition was very good. Sixty-eight were married, five were widows and forty-three were unmarried. Several had had illegitimate children before they came to the hospital. Nearly all of the married patients had borne children, but very few, if any, had ever taken an anesthetic.

To give some idea of the size attained by the enlarged thyroids measurements were made in all cases. The tape line was passed around the neck as near a level as possible. The largest measurement thus obtained was twenty-one inches. Several others were over nineteen inches and there were quite a number at seventeen and one-half. The other measurements were not of particular interest. The majority of the glands in this series were not markedly pendulous. All parts of the gland were not found equally affected; that is, the enlargement was not symmetrical in all cases, but was as follows:

Part of gland affected.	No. of Patients
All three lobes .....	61
Middle and right .....	17
Right only .....	13
Lateral lobes only .....	23
Middle lobe only .....	5
Middle and left .....	0
Left only .....	0
<hr/>	
	119

It quite frequently happened that the enlargement was first shown in the right lobe, or the middle and right lobes, the enlargement

sometimes extending later to the remainder of the gland. No reason is now offered for this order of development. Some experiments in regard to blood supply have been made (R. 8), but nothing has been noted in the work which explains the more marked tendency of the right lobe to enlarge. In the 119 cases at this hospital the left lobe was rarely affected.

In the majority of the cases a stationary point seems to be reached from which no further enlargement takes place. For example, Case No. 36, came to the Newberry State Hospital in 1897. She was then 37 years of age and was brought here from another hospital. She had a marked enlargement of all three lobes. No treatment of the goitre has been given since her admission and apparently there has been no increase in size. She works industriously, and has done so for many years, at the sewing room, and seems unaffected by the large thyroid. There are many cases with a similar record. It appears to be only the exceptional case that goes on to enormous enlargement.

The highest pulse rate of all the cases was 112. The enlarged glands do not seem to interfere with the general comfort of the patients. The woman whose goitre measured twenty-one inches insists upon scrubbing. She seems to enjoy the more laborious work and to be perfectly able to do it. She shows no marked increase of pulse or respiration, or any cyanosis from her efforts.

PART II.

ROUTINE EXAMINATION OF ALL NEW WOMEN PATIENTS FOR A PERIOD OF SIX YEARS.

1910 TO 1916.

The total number admitted was ....	426
Enlargement of one or more lobes ....	93
Normal gland .....	292
No observation recorded .....	41

The reason for no record in some cases was that the patient was too ill for physical examination, and in a few cases, the examination was made by a physician who failed to make special note of the thyroid. In this event, it is possible that the thyroid was not enlarged in any of these cases, and a statement to that effect was considered unnecessary. For that reason, the cases in which no observation was made might be included as negative in calculating the per cent of women afflicted at the time of admission. (Six year period).

Total number .....	426
Enlarged .....	93
Per cent enlarged .....	21

If the forty-one cases were disregarded in the calculation, the per cent of those afflicted would be thirty-one.

With the exception of patients who have returned home or died, all thyroid cases in this group have been included for further consideration in Part 1; i. e., as regards nativity, degree of enlargement, pulse, etc.

#### TREATMENT.

The external use of iodine, and internal use of iodides, have been used in some cases with good temporary effect. No form of treatment for all the women afflicted has been undertaken. Several years ago Berkeley (R. 9) and Follis advised the removal of the thyroid in cases of catatonic dementia precox. A number of cases of catatonic dementia precox were selected, being in an early stage of the mental trouble and having enlarged thyroid glands. Surgical treatment was undertaken, the thyroids being removed, the parathyroids allowed to remain. Of course, there was a radical cure of the thyroid trouble in all of these cases, but otherwise, the result was disappointing. There was no improvement in the mental state in a single case in the series quoted. Indeed, in comparison with preventive measures the treatment seems secondary and less important.

Since 5.8 per cent. of the cases have developed since their admission an examination of the water supply would be advisable. The experiments best suited to show whether or not the water was capable of producing goitre at the present time would be a modification of Gouget's, who dialyzed the water. The material dialyzed from water from these wells could be given to puppies used as test animals, as they are highly susceptible to goitre.

#### SUMMARY.

1. Twenty-eight per cent. of four hundred and twenty-five women patients have goitre. At least 5.8 per cent. have developed goitre since coming here.

2. Twenty-one per cent. of women admitted during a six year period had goitre.

3. Enlargement of the gland was not always symmetrical. Right lobe more frequently shows enlargement and is often the first part affected.

4. Many cases reach a stationary point from which no further development takes place.

5. All cases were the cystic variety, and there was no transition to the exophthalmic type in any instance.

6. No physical discomfort was apparent which was due to enlarged thyroid gland.

7. Cases among men are not unusual here, but cases in this series were all women.

8. Radical cure of a few cases by surgical treatment.

9. Experimental work advised: dialysis of water for goitre producing elements.

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#### EPIDIDYMYOTOMY.\*

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The ineffectiveness of temporizing therapeutic measures for the relief of symptoms and the abridgment of the course of gonorrheal epididymitis has of late years led to much discussion as to the modus operandi of choice, with the balance slowly but surely falling toward the side of surgical intervention in an increasingly large proportion of cases.

From this standpoint it might be of advantage to consider briefly the general indication for mechanical interference, together with a discussion as to the most practicable general method of attack.

Francis Hagner of Washington is in this country usually credited with the inauguration of the practice, though he does not make this claim himself, being fully acquainted with the history of the operation which he later popularized and improved.

The first recorded open operation was in 1852 by Pirogoff who "punctured the testicle for orchitis," and it may be added that *to this day*,

\*Read before the Michigan Section American Urological Association, Detroit, February 28, 1917.



we are subjected to the same lack of distinction, by the physician, between orchitis and epididymilis, the former being of course a pathological condition relatively rare.

It is apparent after a careful examination

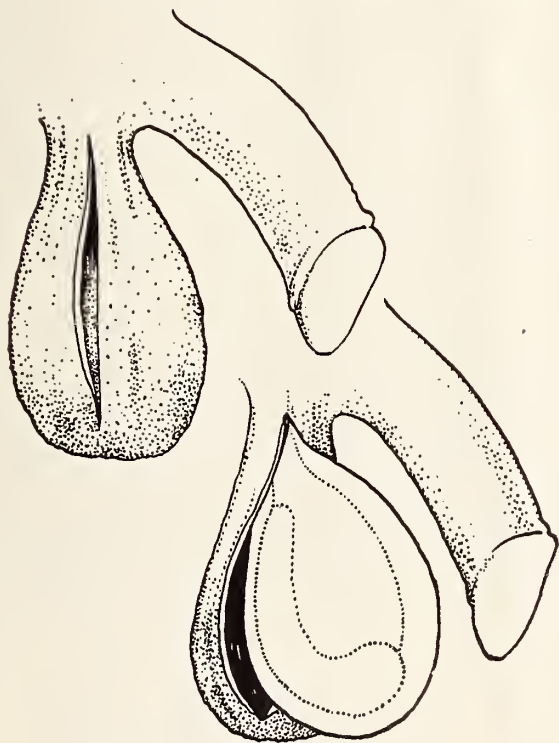


FIGURE 1

Fig. 1. Sac is everted as for bottle operation unless plastic adhesions prevent.

of the literature, that it has been only in comparatively recent years that the involvement of the epididymis was recognized as of more moment in gonorrheal infection than involvement of the testicle. The first operator to make an incision through the tunica albuginea was M. Vidal de Casis. In 1863 H. Smith reported in the *Lancet* that he had operated on the incredible number of 1000 cases. Both these operators, however, as is evident from the discussion in the *Lancet*, 1864, between Smith and Holmes thought they were operating on the corpus of the testicle itself. Spencer Watson and John Hunter seem to have been the first to regard the swelling as affecting both the testicle and epididymis. The former cited the anatomical analogy between the eye and the testicle as to its firm, hard, elastic capsular covering, and McNamara bears out Watson in this analogy by citing the great relief afforded glaucoma by puncture. Puncture merely of the tunica vaginalis was first recommended by Watson in 1867, and he quoted a series of twenty cases where it gave more relief than puncture of the albuginea.

This points to serous effusion between the coats of the vaginalis as the source of pain.

In 1905 Belfield published his "Pus Tubes in the Male," in which he scored the common belief that pus rarely forms in gonorrheal epididymitis, and advanced the opinion, that in a considerable proportion of cases, where the tunica vaginalis contains fluid, and an edema of the skin appears, pus is present in the epididymis. John H. Cunningham in 1915 reported a series, including six bilateral epididymotomies, in which 67 per cent. showed gross pus and *all the others* microscopic pus. The gonococcus was found in every case of macroscopic pus, and was present in nearly all the cases with microscopic pus. From this report one might then deduce the universal presence of massed leucocytic activity in all cases of gonorrheal epididymitis.

Baerman in the pathological study of twenty-eight cases deduced the following conclusions:

(1) In a considerable proportion of cases of epididymis, abscesses are formed in the epididymis.

(2) Suppuration is regularly followed by the appearance of hydrocele. (Hagner says

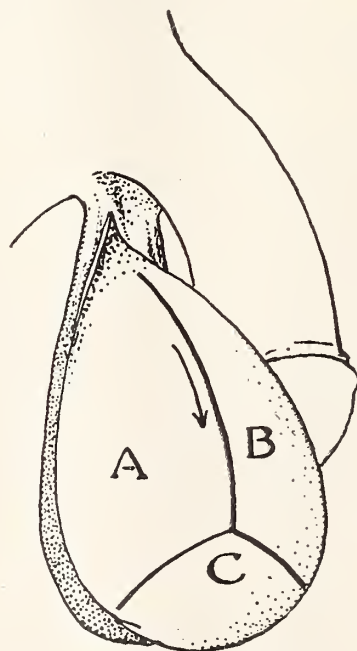


FIGURE 2

Fig. 2. Line of incision in tunica vaginalis. The flap C is usually bound down to the globus minor. By leaving C in place the undesirable condition in Fig. 4 is abrogated.

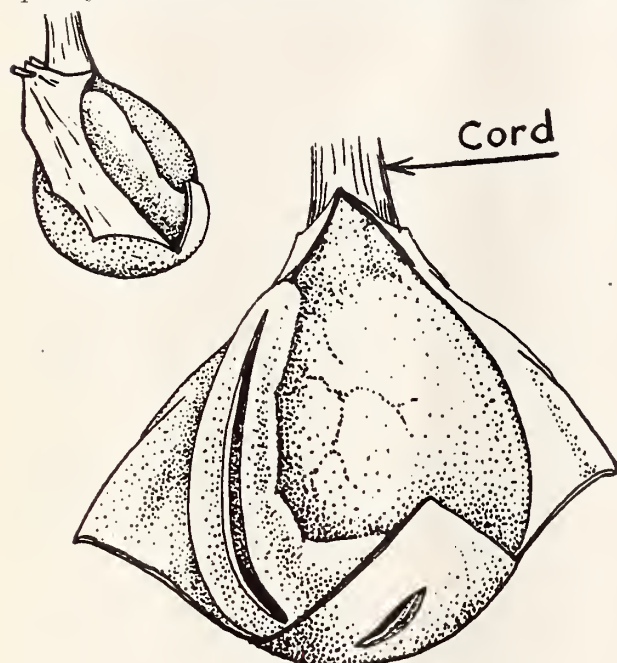
hydrocele has formed when no pus was demonstrable).

(3) Gonococci are found in foci in the epididymis years after the urethral infection occurred.

(4) Early puncture is advised to save the canal from occlusion.

(5) *The hydrocele should be punctured to improve the circulation.*

(6) Incision and drainage of the infected epididymis should be more frequently practiced.



**FIGURE 3**

Fig. 3. Linear incision in epididymal albuginea simply to relieve tension. Below is the puncture into the globus minor.

In an exhaustive treatise Monod and Terrillon deduce the following:

(1) "In gonorrheal disease of the *testicle* the epididymis alone is involved."

(2) "There is a marked dilatation of all the tubes of the epididymis, which they believe to be due to the pressure caused by the infiltration of the inflammatory exudate into the connective tissue surrounding the tubules, resulting in more pressure at one point than another, and hence the obstruction produced causes a backing up of degenerated epithelial cells, pus, refractive granular material and spermatozooids."

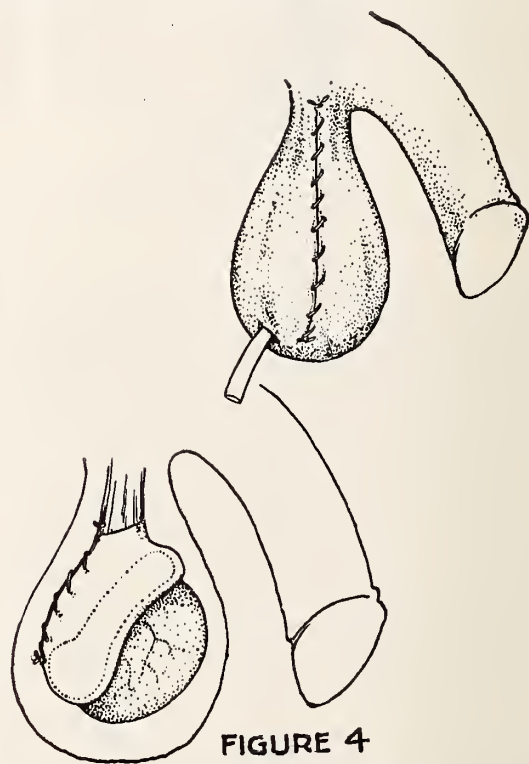
(3) "Such obstructions have been known to lead to the most distressing degeneration of the seminiferous tubules with resulting atrophy of the testicle."

Experimentts made by Monod, Terrillon and Kocher to produce artificially the macroscopical picture of gonorrheal epididymitis, tend to show that the enlargement of the epididymis is due to the inflammatory exudate into the cellular tissues surrounding the tubules rather than to the changes which occur in the tubules

themselves. After having dissected off the connective fibrous tunic from the cord and having made an opening at its upper and anterior border, they fixed a cannula into the cellular tissues. Through the cannula they injected a weak solution of gentian violet. When the fibrous tunic had been sufficiently filled they saw that the induration characteristic of this special form was reproduced, and resembled an increase in size of the epididymis.

Hagner later repeated the experiment, injecting fluid under the fibrous covering of the epididymis in the regions of the globus major and minor, and showed a typical encroachment of the epididymis upon the testicle.

If these authors be correct in stating that the infiltration in the connective tissue of the epididymis causes the obstruction of the tubules in severe cases of epididymitis, then anything that will prevent or lessen this infiltrate is rational and justifiable. Even in the cases where free pus is not found, the infiltration is certainly relieved by the puncture. Therefore any operation that will rapidly relieve the tension



**FIGURE 4**

Fig. 4. The way it should not be done. This method incarcerates any pus present, and fosters a hematocoele from the incision in the epididymal albuginea.

in the early stage is a most important step in the right direction.

One, of course, realizes fully that, in gonorrheal epididymitis, most cases will recover with medical treatment only, but certainly the severe cases will not recover as rapidly or with as little



anatomical disorganization, when medical treatment alone is employed.

The argument might be summed up as follows:

With medical treatment only:

(1) The case will in all probability keep patient off his feet for two weeks or even three.

(2) He is not immuned from another attack on the same side, quite the reverse being the case, as recurrences are proverbially common.

(3) The patient is often subjected to excruciating pain for a week or more with all the concomitant disturbances of general metabolism.

(4) The length of time of involvement enhances the probability, through continued pressure, of occlusion of the duct, with subsequent atrophy of the gland, primarily affecting the spermatogenic function, and secondarily the hormonopoeitic activity, by impairment of circulation from the ever-increasing hydrocele concluding the vicious circle through the consequent inhibition, part or whole, of the free activity of the interstitial cells of Leydig.

(5) There is a far greater probability of involvement of the opposite side.

On the contrary:

With immediate operation properly performed, the hydrocele is reduced, the pressure in the epididymal sac is abrogated, and pus, if present in mass, is evacuated; the patient is almost immediately freed from pain and its attendant disruption of bodily economy, the patency of the duct, and the further integrity of the internal and external secretory cells re-established, the patient is on his feet in a few days, there is little liability of recurrence on the same side, and a much diminished hazard if participation by the epididymis on the side opposite, with a greatly reduced percentage of subsequent sterility.

Surely these are potent and practical arguments in favor of intervention where (1) *pus*, (2) *pain*, or (3) *hydrocele* are present.

There are probably 20 per cent. of the cases which never in any sense become fulminant, which flare up and then begin to subside on the second day, the epididymis is tender, but soft and leathic, and the patient is not sick. It might not be temporizing to watch such a case for two days, as some of them subside quickly, and the after history is uneventful, but if after the third day the condition is obviously becoming progressively worse, the writer would most

eagerly suggest mechanical attack, and by any method that will give a thorough exposure and a permanent result.

A. C. Wilson has proposed to encircle the affected testicle with a fine piece of rubber tubing secured by artery forceps, for one hour a day if it can be borne, and reports an average duration of eight days in six cases, so treated, but this use of the Bier doctrine is only a palliative measure directed against the exigency of the moment, and in no way insures the patient against recurrence, nor frees him from the nidus of infection.

The practice of simple incision over a pus sac in the globus minor is open to much the same general criticism, and according to McKenna is the act of a faker.

Several open operations have been devised, the best being those of Cunningham and Hagner who incise laterally over the site of the epididymis, cutting through the vaginalis and bringing the testicle out of the wound, then puncturing the epididymis and closing with a drain through the lateral opening.

The writer would humbly suggest the following technic:

(1) Incision on the ventral surface of the scrotum down to the vaginalis.

(2) Eversion of sac *in toto* as for a Willys-Andrews operation. (Fig. 1)

(3) Longitudinal incision the whole length of the tunica, with a right and left oblique deflection at the lower end an inch long to form a Y. This permits an eversion of the sac without incarcerating a pus sac if present at the lower end, and where pus is present the small triangle of vaginalis left at the lower end is always plastically bound down, and will not remain as a superfluous flap. (Fig. 2, Fig. 4)

(4) Incision of abscess or abscesses, if present in the glonus minor or body, with a single longitudinal incision along the line of the epididymis to relieve tension. (Fig. 3)

(5) Anchorage of the everted vaginalis with a mattress suture of No. 2 chromic gut, placed loosely behind the cord, high up, to prevent recurrence of hydrocele, which it will do in a very large majority of cases.

(6) Counter puncture through the most dependent portion of scrotal sac and drainage of cavity through a small rubber tube for forty-eight hours.

(7) Irrigation with hot normal saline.

(8) Replacement of testicle, and complete

closure of upper wound with interrupted sutures of silk worm gut.

This technic prevents the recurrence of hydrocele, frees tension, and at the same time takes care of the gross pus formation. It has been practiced by the writer in twenty-two cases with entirely satisfactory results in each case, and with no untoward sequellae of any sort.

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### THE USE OF SULPHIDES IN THE TREATMENT OF MERCURY POISONING.

M. L. HOLM, PH.C., M.D.  
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In view of the universal use of mercury and its various combinations in the practice of medicine and the frequency of toxic symptoms from this drug ranging from slight salivation to fatal poisoning I have been rather impressed with the meager references found to its chemical antidotes in our general literature.

Every physician finds himself frequently in positions where he deems it advisable to administer mercury in insoluble or slightly soluble form in doses largely in excess of what with more soluble forms of mercury would produce toxic symptoms.

Our literature abounds with caution against the use of acids after the administration of calomel yet there is apparently neither chemical nor clinical evidence of any danger from such a combination. On the other hand little or nothing is said about the danger of iodides in connection with large doses of the less soluble mercury preparations and in view of the fact that both drugs are regarded as specifics in syphilis this has seemed to me a rather dangerous oversight.

The iodides form very soluble double salts with mercury compounds and some of the most severe cases of salivation have resulted from this combination.

Mercury poisoning results when an excessive quantity of mercury in soluble form is present within the body. The logical treatment therefore might be either an endeavor to hasten the elimination of the mercury or to render it less soluble. The former may be accomplished by means of the iodides and the latter by means of sulphides. In mild cases of salivation where little or no excess of insoluble mercury is deposited anywhere in the body the use of iodides may be reasonably safe but the first result is always an aggravation of toxic symptoms and the elimination of mercury even as a double salt with iodides is rather a tedious process.

In severe cases of mercury poisoning the administration of iodides is decidedly dangerous and an endeavor should be made to render the mercury insoluble as quickly as possible and keeping it so until all toxic symptoms have subsided. In doing this I advise the use of calcium sulphide in 1 gr. to 5 gr. doses depending upon the severity of the case, by mouth or per rectum or both, repeated every one-half to one hour until the odor of hydrogen sulphide becomes distinctly perceptible from the patient's breath. The quantity and frequency is then diminished but the administration of sulphide is continued until all toxic symptoms from the mercury have disappeared.

In place of calcium sulphide, liquid calcium sulphurata N. F. or in case of emergency even



the common "lime sulphur" spraying solution may be used.

I first used sulphide in the treatment of mercury poisoning three years ago and was impressed with the rapid and complete results. Since that time I have used it in every case with equal success. I feel that we have in the sulphides an absolute control over the action of mercury within the system and that their prompt and early use will alleviate a great deal of unnecessary suffering and occasionally save a human life.

Lansing Clinical Laboratory.

### GASTRIC ULCER ASSOCIATED WITH THE GASTRIC CRISES OF TABES DORSALIS.

CHARLES W. HITCHCOCK, M.D.  
DETROIT, MICH.

March 1st, 1914, there came under my care, W. E. T., age 58, by occupation a dentist, who asserted that his habits had been good of late years but exhibited a reluctance in talking of his earlier life.

He had been healthy as a boy and young man and until about fifteen years before, when he had what he thought was rheumatism (the frequent careless diagnosis of early tabes), but was finally diagnosed as neuritis, and this he claimed to have had, more or less, ever since. He complained of sharp, severe pains then present in the left arm, and always confined to the arms and trunk, never anywhere else.

He looked thin, pale, anemic, and suffered daily with pain which came in spasms, was knife-like in character, and occurred usually in the early morning and late afternoon.

Examination showed an entire absence of the knee-jerks, his pupils were unequal, the left the larger, and neither responded to light. Vision had been impaired for some time. He had had the girdle symptom, and he swayed markedly on standing with eyes closed. Bladder and bowels were well controlled. There was no manual ataxia and gait was not at all ataxic. He improved under daily rubs of mercury, and sedatives so controlled his pain attacks that he was not seen until September, 1915, when he was again seen suffering with paroxysms of severe pain confined to the arms.

July, 1916, he complained of swelling of feet, and left ankle was quite edematous, pulse rapid and irregular, and apex beat over an inch outside the nipple line. Pains were recurring with more frequency, and his left fundus showed a well-marked optic atrophy.

September 27, 1916, he had been vomiting through the night and all that day, ejecting large quantities of blood, though in less pain than usual at his crises. Under ice and ergot, the vomiting and hemorrhage quieted, and he seemed usually well until October 30, 1916, when I saw him in the late afternoon, vomiting matter of stercoraceous odor, looking weak and exsanguinated, though no blood was noted in the vomitus at this time. He died soon after being admitted to the Henry Ford Hospital, that same evening, and by the courtesy of Dr. Brown, Superintendent, and Dr. Sladen, of the medical staff, I am able to present the following notes of the autopsy:

"The body is that of an undernourished white man 172 cm. long. The skin is clear. The abdomen is very much distended. The pupils are large, about equal and irregular. There is serous blood-tinged fluid draining from the mouth.

"On opening the abdominal cavity, a large amount of turbid fluid begins to flow out and a moderate amount of air bubbles through the fluid. The small intestine is very much distended and the coils are glued together by a fibrinous exudate which also covers the parietal peritoneum. The exudate can be peeled off from the peritoneum. There is a fine band of adhesions extending from the omentum and transverse colon to the midline of anterior abdominal wall, well below the umbilicus behind which a loop of jejunum is caught. Above this obstruction there is extreme dilation of the jejunum and duodenum; below it the intestine is normal in size. Just above the obstruction there is a definite twist to the intestine. The appendix is very short and hangs free. There are numerous adhesions around the cecum. The anterior wall of the stomach is bound to the under surface of liver by fresh adhesions.

"The right pleural cavity contains about 300 cubic centimeters of slightly turbid fluid and the base of the lung is firmly tied down to the diaphragm by dense adhesions. There are a few adhesions on the left. The left pleural cavity contains about a liter of clear fluid. The lungs meet in midline and completely cover the pericardium.

"The pericardial cavity contains about 50 cubic centimeters of fluid. The pericardial surfaces are smooth and glistening.

"*Heart:* weighs 390 grms. The surfaces are smooth. All the heart valves are delicate and show no thickening. The heart muscle is normal. Around the opening of the left coronary artery there is a patch of arteriosclerosis. The artery just admits the tip of a small probe. The right coronary artery is normal.

"*Lungs:* are voluminous—everywhere crepitant. On cut section much fluid can be expressed from the

alveoli. The larger bronchi are injected and contain a pinkish frothy material.

"*Spleen*: weighs 90 grams. It is soft. The surface is wrinkled. There is some increase in connective tissue.

"*Stomach*: is covered with fresh exudate on the anterior surface. On the posterior surface near the lesser curvature about 6 cm. from the pylorus there is a large punched out ulcer involving all the layers of the stomach wall and connecting with the lesser peritoneal cavity. The margins of the ulcer are indurated and there are several small bleeding points in the margin and some fairly fresh adhesions around it. The mucous membrane is pale pink.

"*Pancreas*: is of usual size, shape, color and consistency.

"*Liver*: is normal size. The surface is irregular, showing numerous small depressions and elevations. The cut surface is brownish in color. The lobules are well marked. The gall-bladder is adherent to colon and contains a small amount of orange colored bile.

"*Kidneys*: are small, weigh 180 grams. The capsule strips with some difficulty, leaving a granular surface. On section the cortex is very much thin-

ned out, the striations are almost obliterated and the glomeruli cannot be made out. The pyramids are of a dark purple color. The pelvis is normal.

"*Bladder*: Ureters somewhat dilated. The bladder is larger than normal and the wall is very much thickened. There is very marked trabeculation of the mucous membrane which otherwise appears normal.

"*Intestines*: Jejunum and duodenum much dilated. Peritoneal surface of entire intestine injected and covered by yellow friable exudate. Large intestine shows nothing of interest except the exudate.

"*Brain*: not removed.

"*Spinal Cord*: Dura shows no abnormalities. There is very definite degeneration of posterior columns in lumbar enlargement which extends up the thoracic cord.

"*Anatomical Diagnosis*: Gastric ulcer (perforated), acute fibrinous peritonitis. Peritoneal adhesions. Intestinal obstruction. Chronic diffuse nephritis. Arteriosclerosis of left coronary artery. Emphysema of lungs. Bilateral pleural effusion. Hypertrophy of bladder. Degeneration of posterior columns of spinal cord."

1501 David Whitney Building.

#### AFLOAT AND ASHORE.

Two new products which are attracting unusual attention, both in this country and abroad, are Chlorazene (Abbott), Dakin's New Antiseptic, and Parresine (Abbott) the improved, hot-wax dressing for burns. Both of these remedial agents have been passed by the Council of Pharmacy and Chemistry of the American Medical Association, to appear in their "New and Non-Official Remedies," and have been ordered by the United States Navy to be placed on every ship.

The results which are reported by surgeons and hospitals in the use of Chlorazene and Parresine are so remarkable that it would surely pay every physician to become better acquainted with these products.

Literature will be sent on request to The Abbott Laboratories, Chicago, Illinois.

#### PROPAGANDA FOR REFORM.

*Piperazin and Other Organic Urate Solvents*.—From a review of the literature P. J. Hanzlik concludes: there is no reliable evidence to show that piperazin, in small or therapeutic doses, imparts to urine urate solvent qualities, either in direct addition or after excretion; excessive doses produce a slight but negligible increase in uric acid excretion, the same being effectively produced by sodium bicarbonate or sodium citrate; there is no reliable evidence to indicate that piperazin can remove or pre-

vent urate deposits; diuresis is uninfluenced by even large doses of piperazin and its administration does not materially reduce the acidity of the urine; scientific evidence, though limited, and clinical opinion indicates that piperazin is valueless in gout. Hanzlik also reports that there is sufficient evidence to indicate the worthlessness of the following as urate solvents: quinic acid, quinoline, colchicum, piperidin, Urosin, Lycetol, Sidonal, Lysidin and Urol (*Jour. Lab. and Clin. Med.*, Feb., 1917, p. 308).

*Cyanocuprol*.—Studies of the effects of "cyanocuprol" on tuberculous processes, carried out by Japanese investigators, have been published. "Cyanocuprol" is stated to be a copper cyanid preparation, the exact composition of which is being kept secret. Even if its identity should become known, the use of "cyanocuprol" is decidedly in the experimental stage (*Jour. A.M.A.*, April 7, 1917, p. 1057).

*Ambrine*.—Ambrine is a French, secret preparation that has been on the market for many years. It has recently come into prominence through sensational articles in the lay press. For all practical purposes it is solid paraffin to which some material has been added to make it adhesive and more plastic. For use it is heated until liquid and then applied to open wounds and burns, forming a relatively impervious dressing (*Jour. A.M.A.*, April 7, 1917, p. 1057).



# TRANSACTIONS

## OF THE

### Clinical Society of the University of Michigan

Stated Meeting, March 7, 1917

The President, CARL D. CAMP, M.D., in the Chair  
Reported by REUBEN PETERSON, M.D., Secretary

#### DEMONSTRATION OF TWO PATIENTS SHOWING ABNORMALITIES OF CONDUCT ASSOCIATED WITH PSYCHONEUROTIC DIS- ORDERS.

ALBERT M. BARRETT, M.D.

(From the Psychiatric Clinic, University Hospital, Ann Arbor  
Michigan.)

##### 1. *A Patient Showing Abnormal Impulsions Associated With Stealing. Kleptomania.*

Those who are interested in problems of criminality are sometimes concerned with cases in which the impulses which lead to crime are so unusual in their intensity that they at once suggest the character of being abnormal and even manifestations of a definite disease.

In adults and criminals who are repeated offenders the pathologic character of the impulsiveness leading to the act is not always convincing and the problem of differentiating between responsibility and irresponsibility is difficult. Even among these there are individuals who in addition to abnormal impulsive reactions have other symptoms of psychoneurotic character, which suggest that their acts are not to be judged by the standards applied to normal individuals.

Occasionally this problem is met with in the consideration of the conduct of juvenile delinquents.

Recently there came under our observation a young boy aged eleven, who had been brought into the Juvenile Court of Wayne county because of truancy and stealing small sums of money. The fact that his stealing was of a peculiarly impulsive character and was frequently associated with headaches and neurotic manifestations, suggested the desirability of medical observation and on February 3rd, 1917, he was admitted into the Psychopathic Hospital at Ann Arbor.

He was a boy of good physical development and attractive in his childish frankness and nice manners. He appreciated clearly the circumstances associated with his coming to the Hospital and frankly told with little embarrassment that he was here because he "stole and had headaches." For many years he has been unable to resist taking sums of money, usually small, which he knew might be within his reach. He has done this as long as he can remember. Rarely is there any previous planning of a theft. It is only after seeing the money that the desire for it arises and he then is uneasy until he gets it. If there is no one present he will take it at once. If others are in the vicinity he waits for an opportunity. Any delay in carrying out his impulse is distinctly troublesome to him and is accompanied by definite physical suffering. He describes this as a headache which increases in intensity until he sometimes becomes nauseated. His mother has often observed this disturbance. She remarks that his face becomes drawn and there appear in his forehead marks like finger dents. After the headaches pass away, feelings of dizziness come on, which last from a few minutes to half an hour. If he can at once take the money these disturbances remain absent. The money is always spent for candy. On one occasion he took the pocket book of his teacher which contained over \$12.00 and within a few days spent the entire amount for candy. These attacks are becoming more severe and frequent and are only associated with his impulse to steal. Recently he has been watched so carefully that he has had few opportunities to get money. As a result he seems to be continually under extreme nervous tension.

In addition to this he sometimes experiences attacks in which he gazes at the wall as if dazed. Sometimes in these he laughs and twists his mouth peculiarly. Only if shaken and called

to loudly does he rouse out of these. Afterwards he always seems rested and relieved. Of late he has been walking in his sleep. At these times he will hold conversations with his mother, answer questions rationally, and in the morning have no memory of the incident. These experiences are always preceded by a severe headache before going to bed.

He himself describes periods of staring at the wall, where he sees pictures moving before him. These take the form of some picture play he had previously seen. Dreams are frequent. Often these are of people coming with guns and knives to kill him. Recently after having taken fifty cents from his mother's room he dreamed that he went to the bakery and spent all of the money for cakes. There was a man in the shop and money was falling out of his pockets. When he was leaving there were little piles of coins lying about the floor. These he picked up and hid in his pocket as he left for home.

Since he has been under observation in the hospital there has been one instance of sleep walking. Several times he has told of dreams of fantastic and vivid character. In other respects his reactions have been those of a normal healthy boy. In his intellectual development he passes successfully the tests of the Binet scale for the age of fourteen.

That in this case we are concerned with a psychoneurotic disorder is evidenced in the hysterical disturbances of consciousness which occurred at various times and the presence of diminished pain appreciation over one side of the head and right side of the body, and a slight hysterical contraction of the visual field.

An important factor in the production of his disorder is the presence of syphilis, which is shown by a positive Wassermann reaction upon his blood, which has been repeatedly obtained. At first this was of a 2 plus strength and more recently it has been 4 plus. The cerebrospinal fluid shows 6 cells per cu. mm. and a very slight change in color of the third, fourth and fifth tubes by Lange's colloidal gold test. Otherwise the fluid is not pathologic. The only neurologic evidence of the effect of syphilis is inequality of the pupils and a slight slowing of the light reaction. There are no stigmata of syphilis seen in the teeth or body structure.

An interesting factor of possible determinative importance in directing the abnormal impulsive thoughts towards stealing rather than in other directions is that the boy's mother was a repeated offender by stealing and was a sex

delinquent. This led to a divorce by his father when the boy was about two and a half years old. The children were then cared for by their father's mother until our patient was about seven years old. Since then his new mother has been very fond of him and his home relations have been unusually good.

It is possible that the boy's acquaintance with stealing has been directed by discussions in the family of his own mother's conduct. It was never because of lack of money because he was always given all he needed to spend for his childish wants.

In the peculiar impulsive character of the stealing the case may be grouped with the disorder classed as kleptomania. The important factor in this, as in other impulsive anti-social acts, is the irresistible force which leads to the action and which places these as types of disorders which are to be judged from the medical as well as the forensic point of view.

As treatment the boy has received seven intravenous injections of salvarsan without any improvement in the Wassermann reaction. In view of this, further treatment along this line will be discontinued for the present and the boy will be given a series of intramuscular injections of mercury succinimid.

It is not best that he be kept much longer in the Hospital. As he has been living in a crowded city district, it is advised that his life for the next few years be in some place in the country, or at least away from the associations which have in the past so intimately been related to his acts of stealing. Were he to return to these it is doubtful if he could remain well.

It is probable that after a few years the strength of these impulses may be lessened as his interests become attached to occupations and diversions harmless in their nature. However, the prognosis must be doubtful in view of the constitutional syphilis and the existence of an hysterical temperament.

## 2. *A Case of Compulsion Neurosis.*

A condition somewhat similar to that of the small boy in that the conduct of the individual stands in a very close relation to emotional disturbances of unbearable effects, is found in a young Italian woman who has been in the State Psychopathic Hospital for a few weeks. For some time she has been suffering from a feeling that she is being contaminated by uncleanliness and that she in turn may spread this contamination to those around her. This has led to her spending hours each day in



cleaning her home, her clothes, and whatever she may come in contact with. This impulse to avoid objects that she fears may contaminate her and the great expenditure of energy necessary to keep herself and her environment clean makes her life a burden to her and brings her to the Hospital for treatment.

She is an Italian woman, twenty-three years old, who came to this country when a child and lived here until she was about twelve. At this age she returned to Italy and for three years was a student in a convent. After this she returned to this country and at the age of fifteen was married. Almost at once there occurred experiences which made her future married life unpleasant and undoubtedly had much influence in the development of her obsessions.

In August, 1914, she was in Italy caring for her grandmother who was dying from a cancer. There developed at this time a fear that she might be contaminated if she came in contact with the toilet seat. It was not so much a fear of her own contamination as it was that she might bring harm to others whom she came in contact with. For this reason she would wash the seat thoroughly and then be careful that all that had been employed in the cleansing process was put away so as not to touch others. Her own hands she would wash repeatedly and even then she would wash her dress at night because she might have contaminated this in handling the buttons during its removal. Should she touch the tablecloth she would not be easy until it had been washed. One can imagine how extensively such an idea must affect her conduct in all of its phases. Her life became a continuous series of cleansing acts and of great scrupulousness in avoiding objects which might in some way have come into contact with a toilet. Such was her condition when she entered the Hospital on January 27th of this year. She was at this time in the later stages of pregnancy. The fear of contamination and of being unclean concerned all of her activities. She realized clearly the foolishness of her fears but no matter how hard she tried the fears still remained and caused her continued torment.

One incident and its ramifications is illustrative of many others which are continually occurring. On one occasion, recently, she saw a nurse throw a rag, which had been used to clean the seat of the toilet, into the waste can. A day or two later she herself threw something into this same can, and in doing so thoughtlessly touched the cover. At once there arose the

memories of the rag which had been thrown away a few days earlier. She then felt as if she had been made unclean, and that she had contaminated everything she had come in contact with since the incident. It was impossible for her to feel comfortable until she had thoroughly cleaned herself, her hair, her room and numerous objects about the ward. Even after doing this there still remained an uncertainty as to whether she had done all that she could and for this reason she was quite uncomfortable.

While these obsessing fears vary in their intensity, with occurrence of incidents which may precipitate them, there is continually present a state of dejection as she realizes her helplessness in resisting their force.

One recognizes that the symptoms and course of this disorder belong to that form of the psychoneuroses, described sometimes as obsessional neurosis, as psychesthenia, or more frequently as compulsion neurosis.

The specific character of the ideas and fears which obsess the individual vary much. While in this instance the fears stand in relation to the idea of being unclean or contaminated, constituting a clinical variety sometimes designated misophobia, in other instances the fears may relate to places, such as the varieties, claustrophobia and agoraphobia, or to fears and dreads of a large variety of objects or situations.

In all instances the idea which has the compelling force is one which in some way has become over-emphasized with feeling. It is this over-emphasis that gives it an obsessing quality.

Freud has shown that the particular idea which obsesses the individual has not normally the amount of feeling quantity which it now bears. It has taken to itself feeling which originally was a part of some other idea. This feeling becomes available for the attachment by derivation from some idea which had been repressed from the consciousness of the individual because of its unbearable qualities. The feeling then remains free, and ready to attach itself to some other idea. Commonly the idea which attracts the feeling is one which in itself is of more than usual emotional emphasis. In the case of our patient this idea was that of uncleanliness.

The ideas which are most liable to repression are those which stand in opposition to the feeling of right. Experiences, in the study of psychoneuroses, are quite convincing that the commonest ideas to awaken conflicts and thus bring about repression, are of sexual character.

When we study the past experiences and reactions of our patient, with the view of finding a source for the development of mechanisms leading to the compulsive ideas which are troubling her, we find that her life has been rich in factors which are of great significance for the origin of a psychoneurosis.

We find that soon after her marriage, she discovered that her husband had previously been married and thus, according to the doctrines of her church, she had committed a great sin. There was always present, after this, a feeling of doubt as to what course she should take and whether or not she should leave her husband. She never developed a normal affection for her husband and in her marital relations she was sexually anesthetic. Because of this attitude her husband became suspicious and jealous and thus the difficulties of her situation were increased. Conditions were created which made it easy for any latent tendency to a psychoneurosis to assert itself. However, these did not offer any adequate explanation for the origin of the feeling which gave to her ideas such obsessing qualities. Such, according to Freud, must have their origin in experiences encountered during the early child life, which later lead to conflicts and thus to repressions. As one might expect, there are no conscious memories of experiences which might have traumatic force. Her life as a child was made unhappy by quarrels between her mother and father, after one of which she had an attack of complete deafness for three days. She seems to have been unusually scrupulous in her habits. Even as a child she remembers the contrasts between cleanliness and uncleanness being forcefully presented to her in matters of discipline.

There are several occurrences in her childhood days which show a peculiarly responsive attitude on her part towards matters of sexual suggestiveness. As she looks back, she now recalls, that others must have thought her interested in such matters from the way they spoke to her about them. She herself cannot recall that she was unduly curious nor did their sexual character suggest itself at that time. Had any such interest been present, her training for three years in a convent would have furnished occasions for severe mental conflicts. Here between the ages of 12 and 15 she was continually taught the evils of worldly thoughts. On one occasion she was severely disciplined for what was on her part an entirely innocent action, but was regarded by the sisters as some-

thing suggesting sexual curiosity. Immediately after leaving the convent she became deeply attached to a man whom it was impossible for her to marry. A few months later, at the age of 15, she married her present husband, and entered into a life full of difficulties and trying experiences.

She has been under observation too short a period for one to feel that much has been learned about the etiologic mechanisms. What has been learned has been of interest, in that it agrees with what is usually found as the basis upon which the psychoneuroses develop.

While the condition at the present time is a compulsion neurosis, there have been through her life episodes distinctly hysterical in their nature. Such as the attacks of deafness during childhood and the sexual anesthesia that has persisted during her married life.

It is of interest to note that she has suffered most from her compulsive ideas at times, when her general health has been impaired, and when her marital difficulties were most trying. Her recent fears have been much increased since she has been pregnant.

The patient will remain in the Hospital until after confinement, and it is hoped somewhat longer. If so, it may be possible to carry through a psychoanalytic study of her experiences, in the hope that it will lead to a better understanding of the origin of her fears and to an improvement, if not cure, of her troublesome disorder.

#### DISCUSSION.

DR. CARL D. CAMP: I was particularly interested in one feature of the first case and that is the presence of inherited syphilis. While it is possibly true that the inherited syphilis has no direct connection with the impulsive psychosis, yet the case resembles very closely cases reported under the title of "degenerative hysteria" where there is a tendency to truancy, prostitution in the case of girls, and kleptomania and incendiarism in the case of boys, and I have been rather struck with the frequency of a report of a positive Wassermann reaction in these cases. I think that is a point for further investigation.

#### A CASE OF SARCOMA OF THE SPINAL CORD, WITH OPERATION.

CHARLES L. WASHBURNE, M.D.

(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan.)

The following case of spinal cord tumor is brought to your attention because of the multiple character of the tumor growth and its successful removal with two subsequent operations rendered necessary by the persistence of



spasticity in the muscles of the lower extremity.

In the autumn of 1912, the patient, a lady 32 years of age, began to have sharp shooting pains beneath the right scapula, rendered more severe by use of the arm. The previous personal and family history is negative. Up to July, 1914, there were repeated attacks of sharp, shooting pain in the same locality. The pain, in the latter part of 1913, began to be referred to the right lower rib margin, in the region of the gallbladder and a band-like feeling developed at the level of the ninth rib, on the right side. In November, 1914, the pain left the right side and shifted to the left scapular region. The band-like sensation developed on the left side at the same level as on the right and was continuous about the body.

The patient gradually became unable to rise from a reclining position and spent most of her nights sleeping in a chair. In September, 1915, a nephropexy was done on the right kidney. This operation did not relieve the pain.

August, 1915, the patient gave birth to a child and at once noticed numbness and loss of the sense of position in the feet and legs. The hamstring muscles became spastic so that she was unable to stand. In May, 1916, there was a sudden complete loss of control of the sphincters of bladders and rectum.

The patient entered the Neural Clinic of the University Hospital, August 11, 1916. The neural examination by Dr. Camp was as follows:

Fairly well nourished woman of 36 years. Legs are contracted and in flexion. Contraction can be overcome with difficulty. There is anesthesia of the skin extending about two and one-half inches above the umbilicus in front and higher in the back. The X-ray from the fourth to the twelfth dorsal vertebra is negative. Wassermann on the blood, negative. All reflexes markedly exaggerated. Positive Babinski.

August 17, 1916, the patient was operated upon in the Surgical Clinic. A linear incision was made over the spine about ten inches in length, the seventh spine being at the center of the incision. The spinous processes were exposed and from the fifth to the ninth were removed. By means of bone forceps the posterior part of the spinal column was opened, exposing the dura from the level of the fifth to the ninth vertebra. Exactly at the level of the seventh vertebra a definite bulging of the dura was noticed and a marked resistance to the palpating finger. This swelling was about

one and a half inches in length. Hemorrhage was controlled by ligatures and by gauze soaked in adrenalin solution, 1-10,000. The dura was opened at the site of this swelling and a tumor was exposed. This tumor lay in the subdural space and was connected by fine fibrous strands to the dura and to the pia. The tumor itself was freely movable and was easily removed. It was smooth, about the size and shape of a large pecan nut or a pigeon's egg. Adjoining this there was also a similar tumor about the size of a large pea, which was removed without difficulty. The spinal cord at this point gave evidence of much pressure but had not been invaded by the growth. The dura mater was sutured with fine catgut. The soft tissues were sutured with iodine catgut and the skin incision closed with silkworm gut. A soft rubber drain was inserted in the depths of the wound.

The pathologic examination of the growth removed showed spindle celled sarcoma, possibly arising from a neurofibroma.

Examination eight days following the operation showed temperature, pulse and respiration normal. There was severe drawing pain in both legs. Incontinence of urine and feces. Knee jerks equal. Marked ankle clonus. Complete loss of sense of position of the toes. Anesthetic areas at pubes in front and at lumbosacral articulation in the back.

The patient gradually improved and at the time of discharge from the Hospital, September 19, 1916, had fair control of bladder and rectum and could straighten the legs with some difficulty. The band sensation had entirely disappeared. After leaving the Hospital, a sharp, pulling pain developed in the sacral region. The thighs became flexed on the abdomen, and the legs flexed on the thighs. The contractions could not be passively overcome.

She returned to the Hospital November 30, 1916. The examination at that time showed a marked spastic condition of the muscles of the lower extremity. She had perfect control of the sphincters. The condition did not seem to be progressing. It was doubtful if there was a recurrence of the growth, more probably the present condition was due to permanent injury to the cord from the former growth. Exploratory laminectomy was advised.

December 12, 1916, patient was again operated in the Surgical Clinic. An incision was made from the seventh dorsal to the second lumbar. The spinous processes and laminae were removed from the second lumbar, upward to the site of former operation. The cord was

uncovered and no tumor mass found beneath the dura. The cerebrospinal fluid was under pressure. The cord pulsed readily. A director was passed upward, and the site of the former operation explored without locating any tumor. The dura was opened the entire length of the incision. The cauda was picked up and on the left side, the fifth lumbar and second sacral sensory roots were cut, also the twelfth dorsal. On the right side, the first sacral, fourth and fifth lumbar roots were picked up and cut. Spasmodic action was obtained in the limbs, while handling these roots. Care was taken to avoid injury to the third, fourth and fifth sacral roots. The dura was closed with continuous number 0 catgut sutures. The muscles and fascia of the back were stitched with number 2 chromic gut. The skin was closed with interrupted sutures of silkworm gut.

Following this operation the muscles of the thighs and knees gradually relaxed for about a week but did not completely straighten. During the second week the pulling and spasticity recurred. Evidently sufficient nerve roots had not been cut or the resection had been too low. The thighs became again tightly flexed, also the knees were forcibly flexed on the thighs and there was almost a constant pulling pain.

At the request of the patient, a third operation was done, February 17, 1917. An incision was made on a level with the second lumbar vertebra. The tissues were dissected up, the dura opened and the cord exposed. There were some slight adhesions between the cauda and the dura at this point, which separated readily with a blunt instrument. The first, second and third posterior lumbar roots were picked up at their points of exit. A complete resection of the second and third sensory roots was made on either side. The first lumbar roots were left intact. The cut ends of nerve roots of the former operation were plainly visible and had made no attempt at attachment. The dura was closed with continuous number 0 chromic gut, the fascia, with number 2 chromic gut. A rubber tissue drain was inserted beneath the fascia layers for drainage. The skin was closed with continuous silkworm gut sutures.

March 6, 1917. Since the operation, the patient has been more comfortable. There is, on the right side, a burning sensation in the thigh, leg and foot, but no recurrence of the muscle spasm. The left leg shows a similar condition and both are straightening out rapidly. There

is good control of the sphincters. The wound is healed.

Whether the spasticity in this case will be entirely overcome and the patient able to get about on her feet, or whether the muscle spasm will again recur, we are not prepared to conjecture at this time.

#### DISCUSSION.

DR. HAROLD DE B. BARSS: I have had the privilege of assisting at these operations and it is a case which I have been watching with a great deal of interest. I cannot say why the symptoms showed such marked improvement after the second operation, followed later by an exacerbation of the same symptoms and therefore it was with great interest that I watched the third operation and found that the nerves cut at the previous operation were still sectioned and showed no attempt at repair. We could not account for it by any error in technic at the previous operation. It was interesting also to note that after the second and third operations for a few days there was complete loss of control of the sphincters and that gradually she has obtained control of these functions. There is now complete control of the anal sphincter and she is slowly regaining control of the vesical sphincter. Her condition seems rapidly improving and we have every reason to hope that whatever was causing the extreme spasticity has now been ameliorated without necessitating the interference with the motor nerves. In that way we hope that she may gain use of the limbs whereas if we had done a more severe operation such as resecting the motor nerves, we might have removed the spasticity immediately but have obtained a permanent paralysis.

DR. CARL D. CAMP: One practical point is that this patient had the diagnosis of tumor of the spinal cord made some six months before she came to this Hospital and at that time an operation was advised but the patient refused to have it. This diagnosis was made by someone in Chicago. When she came to this Hospital she was, of course, quite prepared to have an operation, but it seems a great pity that she did not have the operation when the condition was first diagnosed because if she had, she probably would be entirely well at this time. After a tumor has compressed the spinal cord for a long time degenerative changes take place which are not relieved by the release of pressure.

DR. WASHBURN: I have not had a great deal of experience with spinal cord tumors. This case was wished onto me, I being the only surgeon present during the summer vacation. It is rather interesting to me to see how many sensory nerve roots can be cut and the patient still have sensation. I shall watch this case with a great deal of interest to see just exactly how much good our operative procedures have done. I think already enough has been accomplished to warrant these operations. This woman was a pitiful spectacle when I first



saw her as she had no control of the sphincters, whatever.

There are other things we can do with this case if the spasticity recurs. We can do as is done in spastic paraplegia in children, tenotomies for the purpose of relieving the muscle spasm. I don't think this is going to be necessary unless the condition recurs. It seems to me that her limbs are beginning to let up. She does not complain of a pulling pain any more. It is a burning sensation. This is the first time that this has been so. So I look upon this as a hopeful case. We are going to put Buck's extension on the legs for the purpose of extending the knees, which will not relax on account of having been in this position so long. When the legs are straight we shall put on splints to hold them in position and get her on crutches as soon as possible.

### THE DIFFICULTY OF DEMONSTRATING SPIROCHETES IN SYPHILITIC PLACENTAE.

R. A. BARTHOLOMEW, M.D.

(From the Clinic of Obstetrics and Gynecology, University Hospital, Ann Arbor, Michigan.)

In a recent study of a series of cases of pregnancy complicated by syphilis (1), I was impressed by the fact that in a considerable number of cases of undoubted syphilis, the placentae were diagnosed histologically as only suggestive and occasionally as entirely negative. In another group of cases there was almost no clinical evidence of syphilis and yet the placentae were diagnosed histologically as typically syphilitic.

The occasional failure of the clinical to confirm the histologic findings and vice versa, has more than a purely scientific interest, in that we are occasionally unable to recommend for adoption, an infant, negative in every way except for a placenta diagnosed as possibly or positively syphilitic. To be on the safe side, we often institute thorough antisyphilitic treatment in such a case—perhaps unnecessarily.

If such placentae really are syphilitic, the one absolutely conclusive proof should be the demonstration of the spirocheta pallida. Attempts to demonstrate the spirochete in syphilitic placentae by the silver impregnation method of Levaditi have frequently been made by different observers with results varying from partial success to complete failure.

The results of investigation along this line up to the present time have been collected and reviewed by Dr. F. P. Davis, of Philadelphia in a paper entitled "Syphilis In Its Relation to Obstetrics." (2) To quote from this paper:

Mohn reported sixteen cases of which six were positive. The spirochetes were frequently present in normal villi but were not found in decidua nor in spaces between villi nor in aggregations of cellular tissue. In the cord they were present in the walls of the vessels. He believed the evidence pointed to the passage of the infection from the fetus and not from the mother and inferred that in clear cases of syphilis the cord will be positive in 50 per cent., and the placenta in 70 per cent. Vollich and Leonditi found spirochetes in the fetal part of the placenta but only few in the maternal portion.

From a review of the literature and personal observations Davis concluded that the spirochete is the best evidence of syphilis; that the organism is rarely found in the placenta, but if present, it is in the fetal portion, in the walls of the villi, favoring the idea of the transmission of syphilis from the fetus to the mother; that in cases where the mother is syphilitic, although the fetus may show no signs of syphilis, spirochetes are found in the cord in over 50 per cent. and where both parents are syphilitic, the placenta shows evidence of syphilis in 70 per cent.

That these figures do not give a true estimate of the difficulty of demonstrating spirochetes in syphilitic placentae is attested by the results obtained by Pauli (3) who examined twenty-four histologically syphilitic placentae, by the Levaditi method and in not a single case was he able to demonstrate a spirochete although careful search was repeatedly made. In eleven of these cases large numbers of spirochetes were found in the fetal organs at autopsy. After a review of the literature on the subject, he concluded: 1. That the spirochete is rarely found in syphilitic placentae and then only after prolonged search. 2. That the anatomic changes in the placenta result from toxins produced by the spirochetes in the fetus and are not due to the actual presence of the organisms in the placenta. 3. That the placenta is not the focus of infection, this conclusion being borne out by the fact that the spirochetes are never found in the maternal portion of the placenta but only in the villi themselves.

Plass (4) reports the finding of the spirochetes in the tissues of thirty-five out of seventy-five babies dead from all causes and autopsied, but evidently he did not search for the organisms in the placenta, as he adds: "The *Treponema pallida* are present in the syphilitic placenta in such small numbers that they can be

MOTHER							CHILD AT BIRTH.						PLACENTA			CORD		CON- TROL.
Obst. No.	Full- term	Prem.	Misc.	Abort.	Wasser.	Notes.	Wt.	Condition	Wass.	Subsequent History.	Splro- chetes demon- strated.	Hist.	Levadiiti sections	Result	Levadiiti sections	Result	Result	
1196	1			1		No history of lues. Prema- ture labor 7½ mo.		Still-born.	+++			(4)	3	Neg.			Positive	
1229	1				++++	Secondary stage of lues dur- ing third mo. of preg. Not treated. Prem. labor.		Still-born macerated.		Autopsied. Lues.	Positive	(4)	2	Neg.			Positive	
1235					—	No history of lues. Mild acute nephritis at 9th mo. Full term labor.	3720	Apparently normal.	—	Remained well. Wassermann nega- tive at 5th week.		(3)	3	Neg.			Positive	
1242				1	++++	No history of lues. Full term labor.	4120	Apparently normal.	—	Remained well.		(1)	3	Neg.			Positive	
1268					+++	Premature labor at 7½ mo. during secondary stage of lues. Not treated.	1870	Premature but apparently nor- mal.	—	Survived. Given in- jections. Wass. neg. at 4th mo.		(3)	4	Neg.			Positive	
1283		1	2		++++	Secondary stage of lues at 4th mo. of preg. Inefficient treat- ment. Prem. labor at 8½ mo.	2240	Premature but apparently nor- mal.	—	Remained well.		(1)	4	Neg.			Positive	
1292					++++	Secondary stage of lues at 7th mo. of preg. Not treated. Full term labor.	2875	Apparently normal	—	Syphilitic eruption and Wass. ++++		(4)	7	Neg.			Positive	
1296	1			2	‡	No history of lues. Not treat- ed. Full term labor.	3493	Apparently normal	—	Remained well.		(4)	3	Neg.			Positive	
1298					—	No history of lues. Full term labor. Wassermann after la- bor also negative.	3820	Meningocele and club-foot.	—	Remained well. Wassermann neg. at 4th mo.		(4)	4	Neg.			Positive	
1299					—	No history of lues. Full term labor.	2760	Apparently normal.	—	Remained well. Wass. negative at 6th week.		(4)	5	Neg.			Positive	
1335				1	++++	History suggestive of lues. Premature labor.		Still-born macerated.			Positive	(4)	3	Neg.			Positive	
1337					+++	No history of lues. Full term labor.	3580	Apparently normal.	++++	Neo-salvarsan inj. Well at 6th wk. Wass. + at 4th wk		(3)	3	Neg.	1	Neg.	Positive	
1386	4	1	1		++++	No definite history of lues. Full term labor.	2625	Apparently normal.	—	Remained well.		(1)	1	Neg.	1	Neg.	Positive	
1403					++++	History of lues. Full term labor.	2445	Apparently normal.	—	Remained well. Treated by Inunc- tions.		(4)	1	Neg.	1	Neg.	Positive	
1405					++++	No history of lues. Prema- ture labor.	2676	Apparently normal.	‡	Remained well.		(4)	1	Neg.			Positive	



demonstrated. if at all, only after a prolonged search. The time required for such a careful study is too great to make the method applicable for routine work."

Believing that the variation in these results made it desirable to test further the value of this means of diagnosis, I examined the placenta for spirochetes in fifteen cases in which syphilis was diagnosed either by the histologic appearance of the placenta or by the clinical evidences. The histologic diagnosis on the placenta has been entered, in the table, by number as follows: 1, normal placenta, 2, placenta showing fibrosis, sclerosis, or obliterative changes to a slight degree but within normal limits, 3, placenta showing the same changes, more marked, with more cellularity and crowding of villi, 4, placenta showing definite interstitial chorionitis, positively syphilitic.

*Preparation and Technic.*—Immediately after the expulsion of the placenta, a small piece about 2 cm. square through the entire thickness of the placenta was cut away and fixed at once in 10 per cent. formalin. In three cases a small piece of cord taken from the umbilical end was also similarly fixed.

After fixation for several days or more, small pieces averaging  $\frac{1}{2}$  cm. square, were cut from these specimens and placed in 96 per cent. alcohol for twenty-four hours, 2, transferred to distilled water for one hour, 3, transferred to 2 per cent. silver nitrate solution in dark bottles and kept in incubator at  $37^{\circ}$  C. for three days, 4, washed in distilled water for two hours with one change, 5, put in solution of pyrogallie acid (16 grms.) water (400 c.c.) and 40 per cent. formol (20 c.c.) for two days, 6, washed in distilled water one hour, 7, 96 per cent. alcohol twenty-two hours, 8, absolute alcohol twenty-two hours, 9, xylol one hour with one change, 10, paraffin sixteen hours, 11, imbedded, blocked and sectioned 3-5 microns thick, fixed to slide, paraffin removed, and mounted in balsam. Examination was made under oil immersion lens, going over each section systematically with mechanical stage. With each set of tissues a piece of known syphilitic fetal liver was treated by the same technic as a control on the method.

In the following table giving data and results, ++†† and ++† indicate syphilis, ++ strongly suggestive; + suggestive; and † slightly suggestive. Babies, who remained well, remained so up to time of discharge from the Hospital, usually at the sixth week. Subsequent condition could not be followed.

It will be seen from the table that although the spirochetes were readily demonstrated in the controls, in no case could they be found in suspected cord or placental tissue on repeated examinations. In two of the cases the fetal liver was found to contain numerous organisms, easily demonstrated.

In view of these results it would seem to be futile to attempt to diagnose syphilis by the demonstration of spirochetes in the placenta by the Levaditi method. The examination of the fetal liver in a suspected case, coming to autopsy, offers a much greater chance of success, and should be made use of as a practical method.

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#### DISCUSSION.

DR. LESLIE L. BOTTSFORD: I haven't anything to add to Dr. Bartholomew's paper from the microscopic standpoint. According to most men the placenta offers a macroscopic diagnosis of lues; that is, a typical syphilitic placenta is supposed to be much larger and heavier than a normal placenta, the latter approaching one-sixth of the body weight of the fetus. The syphilitic placenta should weigh from one-fifth to one-quarter or one-third of the fetal weight. In all our cases here we have seldom seen a typical syphilitic placenta either in size or appearance. The syphilitic placenta is said to be lighter in color, pinkish, with a rather greasy gray appearance.

DR. UDO J. WILE: The negative results of Dr. Bartholomew and of other investigators seem to me to throw considerable doubt upon the theory, of those who favor the maternal source of infection in all cases of so-called hereditary syphilis. Those who adhere to this theory believe that the placenta is syphilized from the mother and acts as a giant chancre and so syphilizes the product of conception. The fact that most of the syphilitic changes are on the fetal side and not on the maternal side, and the fact that so many of the investigations such as Dr. Bartholomew has undertaken are entirely negative, seem to me to be very much against that view and to point at least in some cases to a paternal source of infection.

DR. CARL D. CAMP: I would like to ask Dr. Bartholomew how the Wassermann reaction and the blood from the placenta compared with the report of the histologic condition of the placenta. As I

understand it, he found spirochetes in no case. I was wondering if the Wassermann reaction was sometimes positive.

DR. WILE: In connection with the point that Dr. Camp and I brought up, the explanation of positive Wassermann reactions in mothers who have given birth to syphilitic children and in whom there has never been a history of syphilis from the standpoint of clinical symptoms or signs, it is not at all impossible that there has been a filtration of complement binding substances through the placenta into the maternal blood from the infection if one can reconcile the paternal source of infection as occurring. It is an undeniable fact that most of the mothers who give birth to syphilitic children have never had active manifestations of syphilis brought to their attention and the interpretation of that was the basis of the Colle's law that a mother who gave birth to a syphilitic child could suckle that child with impunity whereas the child would infect a wet nurse who has never had syphilis. It seems to me that that clinical fact, together with these findings, is very suggestive that the complement fixation test in mothers who have borne syphilitic children in some cases may be due to a filtration of the lipid substances through the placenta from the fetus.

DR. CAMP: How did Dr. Warthin's report compare with the Wassermann?

DR. BARTHOLOMEW: It was more frequently positive than the Wassermann. That is a point of dispute between our department and Dr. Warthin's department. He holds that these cases are truly syphilitic; that some time in the future they will develop the manifestations of lues. We have many cases in which there is no clinical evidence of lues whatever, Wassermann's negative on the mother and child, nevertheless the placenta comes back as typically syphilitic. During the entire time that the child is in the Hospital, to all appearance it is as healthy and normal as any child. It is full term, in fact, we have nothing against it except syphilitic placenta, and it was to prove that these placentae were syphilitic that I undertook to demonstrate spirochetes.

**\*CATARACT DELIRIUMS. A COMPLETE REPORT OF THE CASES OF CATARACT DELIRIUM OCCURRING IN THE OPHTHALMOLOGIC CLINIC OF THE UNIVERSITY OF MICHIGAN BETWEEN THE YEARS 1904 AND 1917.**

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The literature as regards deliriums following cataract extractions is not very full. Practically nothing has been written in English on this subject, so important from the standpoint of an ophthalmologist, except a paper published

in the *Journal of the American Medical Association* of Sept. 27, 1913 and written by Dr. Walter R. Parker. This paper takes up eleven cases seen in this clinic and is the only reference in English on post-cataract extraction deliriums to be found in the literature.

The subject receives little note in the *American Encyclopedia of Ophthalmology* now being published. The substance of this reference is that the prognosis for life is usually bad when the delirium occurs. Our records, however, would tend to show that such is not the case.

Sherzog in 1842 reported a psychosis occurring after eye operations and Sichel in 1863 reported seven or eight cases of a peculiar delirium following cataract operations. The cases of the latter were all typical cataract deliriums as we recognize them and occurred in patients over sixty years of age. He attributes the delirium to homesickness and the bandaging of the eyes.

Arlt in 1874 advocated the uncovering of the unoperated eye when a cataract patient became restless before the fourth day, mentioning the fact that "in old people, much run down, timid and nervous, mental disturbances may occur the first few days after the operation."

Psychiatry throws no light on the subject except to say that the deliriums are usually a manifestation of senile dementia, often on an alcoholic basis. No classification, however, is made from a psychiatric standpoint.

Burr in the *Journal of the American Medical Association* of December 11, 1911, says that the transitory delirium following operations rarely occurs in the aged without the presence of severe arteriosclerosis and marked disease of the kidneys. He thinks that the delirium is not due to the arteriosclerosis but to poisons carried to the brain in the circulation. Others ascribe postoperative deliriums to the trauma incident to operations, the cutting of nerves, etc.

Deliriums are often reported occurring after other operations and gynecologists and surgeons are continually reporting deliriums occurring in their clinics. The literature is replete with theories and discussions as to the etiology of postoperative deliriums but no definite basis has been accepted.

Englehardt well sums up the whole situation when he draws the following conclusions from his observations: First, that postoperative psychosis occurs in individuals predisposed by heredity, chronic intoxication, grief or care; second, that the weakness incident to the opera-



tion or disease preceding can hardly be considered essential, at the most it may be considered as the determining factor in predisposed cases; and, third, that there are cases of postoperative psychosis in which an etiologic understanding is not yet acceptable.

From the findings in this Clinic alone we claim the following etiologic factors:

The first and most important factor in the causation of postcataract extraction deliriums is the age of the patient. Of the thirty patients having deliriums among the 962 cases from which this report is compiled, the youngest male was 51 and the youngest female 62 years of age. The average age of the males, twenty-four in number, was 72 and the average age of the females, six in number, was 73 $\frac{1}{3}$  years. The average age for both sexes, then, was approximately 72 $\frac{1}{3}$  years while the average age of the patients not having deliriums was less than 70 years.

Males are much more prone to this condition than females as 3.9 per cent. of the 610 males operated upon had deliriums while but 1.7 per cent. of the 352 females had them.

The influence of alcohol, whether taken in moderation or in extreme is shown by the fact that 36.6 per cent. of those having deliriums drank to a greater or less extent.

That syphilis apparently plays no part in the etiology is shown by the fact that so far as our records go there were no positive Wassermanns in any of our cases.

Every patient except two was American born.

Some of our worst cases were in patients of a naturally suspicious or childish disposition. Many, indeed, were diagnosed as potential cataract deliriums when they first appeared in the Clinic. One who is continually associated with cataract patients can usually tell just which patients need the most watching.

The extrinsic factors causing deliriums are numerous. Old people placed in a dark, strange room with a stranger to take care of them before they have recovered from the strain of the operation and the anticipation which is even harder, if they have any tendency towards delirium stand a much greater chance of showing it than under normal circumstances. Care of the emunctories is essential to the comfort of the patient and some deliriums appear to have been precipitated by allowing the patient to suffer an unnecessarily long time with a full bladder.

With the eyes bandaged little noises are magnified into loud ones; quick movements or un-

sympathetic handling of the patients, making them uncomfortable or unhappy may destroy their balance completely. Loud talking, whispering and laughing may cause the development of ideas of persecution and hallucinations. Making a patient take a medicine he doesn't want or refusing him some simple comfort has the same tendency. In fact almost anything in the way of a disturbance or inconvenience may be the basis of a severe delirium.

The symptoms of cataract delirium are simple and should never be missed by the veriest young nurse. The main cardinal signs which should always be watched for are increased irritability, restlessness, slight irrationalities of speech, purposeless movements of the hands, and incoherence.

These symptoms gradually increase in intensity or in very mild and often undiagnosed cases may be the only evidence of mental unbalance. In the more severe cases the symptoms begin usually at night on the second day after operation. They may begin the day of the operation or a week or so later but the average case develops within two or three days and usually at night. From mere restlessness the patient gradually goes on to complete or nearly complete disorientation. This is present in all degrees and even in the same case varies within a few hours or minutes. They are disoriented for time, place and person. Half our patients were completely disoriented during the course of their delirium and most of the others were partially disoriented.

Ideas of persecution develop with the disorientation and various auditory and visual hallucinations. The patient may become maniacal because of these and attempt to jump out of a window or fight those in attendance.

Some of these attacks resemble more a typical delirium tremens and in these an alcoholic history is always found.

Associated delusions and illusions are very common. In some cases the patient never recovers from these and may still be disoriented and irrational at discharge some days or even weeks later.

The average delirium lasts from one to two days, although some last but a few minutes and some last for weeks.

One patient had a cerebroarteriosclerotic attack following an active delirium. When his arteriosclerotic attack had subsided somewhat he regained his normal mental balance.

The treatment of a cataract delirium varies greatly with the individual case and it is im-

possible to lay down a specific course of treatment. The drugs most effectively used in controlling these patients are those of the hypnotic group rather than the opiates. It has been the experience of those in the Clinic that morphine, codeine, and others of that group have little or no effect on the delirium while the hypnotics such as, veronal, trional, chloral, chloretone and others have been used with a reasonable measure of success.

For a considerable length of time bromides were given routinely to all cataract patients in an attempt to avert attacks of postoperative delirium, but this measure was of doubtful value and has been discontinued.

The most efficacious prophylactic measure that has been adopted is the requiring of special nurses for all cataract cases. Under careful and skillful nursing many cases which would have developed a delirium have run a normal course. Care for the comfort of the patient is then considered the first prophylactic measure. The patient is kept in a dark room and as quiet a room as possible with the facilities we have at hand.

When the delirium is first noted hypnotics such as veronal or trional grs. X are administered in the hope of averting the attack. This is very often all that is necessary. Sometimes

this dose is repeated. In case the patient becomes very unruly and refuses to take drugs by mouth we give 1/200 of hyoscine hypodermatically and after waiting forty-five minutes repeat the dose if necessary. This usually will control all but the very severe attacks.

A measure that very often helps a great deal is to remove the pad from the unoperated eye and this is usually one of the first steps taken. If the anterior chamber of the eye is formed the patient is sometimes allowed to sit up in bed or even to get out of bed. The patient is reassured in every way possible and if necessary forcibly restrained.

One of the first investigations is as to the amount of urine the patient has passed since the operation and catheterization is sometimes the means of stopping a threatened delirium.

Chloretone grs. V or X by rectum is resorted to in very severe cases.

In giving hyoscine we always watch carefully for signs of an idiosyncrasy as one of our patients who had an idiosyncrasy for the drug taught us a valuable lesson in that line.

The following tables will show the age, sex, occurrence of the delirium, character of the delirium and method of control in the thirty cases from which this report is made.

	NO.	AGE & SEX	HABITS	TIME	CHARACTER OF DELIRIUM.	HOW CONTROLLED.
I.	7769	76 F.		2nd night.	Hallucinations-auditory and visual. Delusions.	
II.	6496	78 M.		2nd day.	Disoriented for time and place-delusions. Lasted two days.	Hyoscine 1/200.
III.	5788	68 M.	Beer drinker	2nd night.	Irrational-disoriented for time, place and person. Ideas of persecution.	Hyoscine 1/100. Bromides grs. XV every 3 hrs.
IV.	5876	68 M.		2nd night	Talkative-disoriented for time, place and person. Visual hallucinations. Ideas of persecution. Lasted 3 days.	Hyoscine 1/100. Pad removed from good eye.
V.	4345	78 M.	Moderate.	1st night.	Visual and auditory hallucination. Patient developed a temp. and became more delirious. Diagnosed as senile dementia on an alcoholic basis by Dr. Barrett.	Morphine ¼. Pad removed from unoperated eye.
VI.	2126	72 M.		3rd night.	Disoriented for time and for place. Visual and auditory hallucinations. Talkative.	
VII.	746	75 F.		2nd night.	Restless and confused. Incoherent. Emotional.	Amenable to suggestion. Veronal grs. V.
VIII.	719	75 M.		3rd night.	Mild delirium. Slightly disoriented for time, place and person.	
IX.	706	80 M.	Moderate.	2nd night.	Restless at first. Then delusions and visual hallucinations. Uncontrollable. Incoherent. Completely disoriented.	Hyoscine 1/100. Veronal grs. V. Little effect from either.
X.	8/12/10	77 M.		2nd night.	Delirium increasing in intensity and lasting over a week.	
XI.	12/7/09	62 F.		3rd day.	Fairly well oriented. Suspicious. Ideas of persecution. Talkative. Senile.	
XII.	6/14/09	80 M.	Chronic Alcoholic	3rd day.	Patient threatened to have delirium tremens.	Averted by moderate doses of whiskey.
XIII.	10027	77 M.	Heavy drinker.	2nd day.	Increasing delirium lasting 1 day. Probably delirium tremens.	Trional grs. X and bromides in large doses. Large doses of whiskey.



	NO.	AGE & SEX	HABITS	TIME	CHARACTER OF DELIRIUM	HOW CONTROLLED
XIV.	10104	68 M.		2nd day.	Nervous and irritable at start. Next morning was wildly delirious.	Veronal grs. X. Morph. $\frac{1}{4}$ Hyoscine 1/100. Morph. $\frac{1}{8}$ .
XV.	9534	72 M.		2nd night.	Restless, disoriented for time and place. Delusions. Hallucinations of simple nature.	Veronal. Hyoscine.
XVI.	9386	73 M.		2nd day.	Unruly and actively delirious. Childish and mentally unbalanced before operation. Ideas of persecution and auditory and visual hallucinations. Illusions. Delirious for two days and still somewhat disoriented at discharge.	Hyoscine 1/100. Morph. $\frac{1}{8}$ . Veronal grs. X.
XVII.	9480	52 M.		3rd day.	Disoriented completely. Ideas of persecution. Quieted at first but later became wildly delirious with delusions and hallucinations. Strong ideas of persecution caused him to attempt to jump from the window. Next morning had a cerebro-arterio-sclerotic attack after which he was confused in speech and very weak but well oriented.	Veronal grs. X. Large doses of bromides.
XVIII.	8927	51 M.	Moderate drinker.		Patient being an alcoholic developed signs of psychosis being extremely restless with a tendency towards the irrational.	Given whiskey egg nogs 4 times a day and improved within a few hours.
XIX.	11755	65 M.	Moderate.	4th day.	Increasing delirium. Ideas of persecution. Disoriented for time and place but not completely for person. Lasted two days.	Sod. bromide grs. XV q. 4 hours. Hyoscine 1/200 Trional grs. X 3 times.
XX.	11448	85 M.		1st night.	Showed mental changes becoming more and more irrational. Not hard to control at first but completely disoriented with delusions and hallucinations—auditory and visual. Next morning became wildly delirious and excited. Ideas of persecution and vague hallucinations. From then on the patient never recovered his right mind except at rare intervals and only for a short time. Was disoriented for place and time but not entirely for person. Vague ideas of persecution until discharged and continuing until his death a month later.	Trional grs. XX. Hyoscine 1/200. Catheter; Sod. bromide grs. XV q. 4 hrs.
XXI.	10530	66 M.		2nd night.	Slightly delirious, disoriented for place. Easily controlled.	Bromides. Trional.
XXII.	10786	64 M.	Moderate.	4th day.	Slight delirium. Irritable. Ideas of persecution. Disoriented for time.	Hyoscine 1/100. Bromides.
XXIII.	2/25/09	81 M.		2nd night.	Slight delirium. Easily controlled.	Pad removed from unoperated eye. Propped up.
XXIV.	4/28/09	82 F.		1st night.	Irritable-restless. Flight of ideas. Completely disoriented.	Pad removed from unoperated eye. Given codeine.
XXV.	4/16/08	75 F.		2nd night.	Wildly delirious. Hard to control. Increasing delirium. Discharged against advice and before reason had returned.	Partially controlled by morph. $\frac{1}{8}$ .
XXVI.	9049	76 M.	Moderate.	2nd night.	Restlessness increasing to wild delirium with ideas of persecution and completely disoriented. Talkative. Tried to jump out of window. Lasted two days.	Hyoscine 1/100. Morph. $\frac{1}{4}$ . Pad removed from unoperated eye. Chloretone grs. XV by rectum.
XXVII.	9742	72 M.	Moderate.	4th night.	Active delirium. Ideas of persecution, delusions. Lasted 5 days. Disoriented for time and place.	Veronal. Hyoscine. Morphine.
XXVIII.	10178	71 M.	Periodic drinker.	2nd night.	Completely disoriented. Ideas of persecution. Naturally bad disposition.	Hyoscine.
XXIX.	8291	79 M.		2nd night.	Unruly. Disoriented completely. Ideas of persecution. Patient had an idiosyncrasy for hyoscine.	Hyoscine 1/200.
XXX.	8256	70 F.		12th day.	Began to show mental disturbance. Ideas of persecution. Auditory hallucinations. Still mentally unbalanced at discharge.	Moved into a light place and reassured. Little effect.

Above lists include all cases prior to February, 1917.  
Totals.

Males 24. Per cent. of males having delirium, 3.9%. Per cent. of both sexes having delirium, 3.1%

Females 6. Per cent. of females having delirium, 1.7%.

Alcoholics 11 or 36.6%.

Youngest male, 51. Youngest female, 62. Oldest male, 81. Oldest female, 82.

Average age of males, 72 years. Average age of both sexes, 72  $\frac{4}{15}$  years.

Average age of females, 73  $\frac{1}{3}$  years.

Average length of time after operation before development of delirium, 2 to 3 days.

Average length of duration of delirium, 1 to 2 days.

The prognosis as regards the eye operated upon is usually not affected by the occurrence of a delirium as in only one case in our series of thirty deliriums was the eye definitely injured as a result of trauma caused by the patient while he was delirious.

The prognosis as regards the immediate health of the patient is also fairly good as in only one case did death occur before discharge and while the patient was still delirious. This patient died of an intercurrent pneumonia.

As before stated the American Encyclopedia of Ophthalmology states that the prognosis for life is very poor when a postcataract extraction delirium occurs, but in our whole series there are only three deaths, immediate or remote, on record and only two of these patients died in a delirious condition never recovering their mental balance. The other to die in this condition was an old physician who had had attacks of senile dementia previous to his entrance to the hospital.

The third was that of a heavy drinker and his delirium was more of an alcoholic psychosis.

#### SUMMARY.

The following essential facts may be extracted from this paper:

1. Deliriums occurred in 3.1 per cent. of the 962 cases operated upon.
2. The average age of the patients having deliriums was  $72\frac{1}{3}$  years while the average age of those having senile cataracts was between 60 and 70.
3. Thirty-six and six-tenths per cent. of our cases were alcoholics.
4. In no case in our series did the urine indicate a nephritis.
5. Hypnotics are the most effective drugs in controlling these patients.
6. The prognosis as regards the health or the vision of the patient is usually not affected by the occurrence of a delirium.

Despite the fact that kidney disturbance is said to be necessary in the development of postoperative deliriums we could find no cases in our records which had albumin, casts, or sugar in the urine.

#### DISCUSSION.

DR. ALBERT M. BARRETT: It would be very interesting to know how many if those patients showed signs of mental abnormalities before the operation. It is generally supposed that we are dealing in these conditions with the so-called dark room delirium. We see it sometimes in prisoners who are alcoholics incarcerated in a dark cell, and in certain other persons who show signs of mental abnormalities.

I should be interested to know how many of these patients develop later senile dementia, as we know they often do.

DR. GRADY E. CLAY: There is very little to add to Dr. Brownell's paper. Cataract delirium in most of the various textbooks is scarcely mentioned. It is certainly a very common condition and should receive a most prominent place in postoperative treatment. During the past year we have used special nurses on all cataract cases and there has been a decided drop in the number of cataract deliriums in our Clinic.

DR. CARL D. CAMP: It would seem to me that the statement of Dr. Brownell that the hypnotics had better effect than narcotics might cast a light upon the etiology. We find that the psychoneuroses are not favorably influenced by the use of morphine, in fact they are decidedly unfavorably influenced and they are much better treated by hypnotics. I would like to suggest that he might try valerian in this connection and also the prolonged warm bath.

DR. BROWNELL: In regard to Dr. Barrett's statement, I would say that at least half of our patients when they came in were suspected of being potential cataract deliriums and showed a predisposition for it. I have no accurate figures on this point, but I don't think that there is any question but that half of our cataract deliriums are diagnosed before they go to operation.

Treatment with valerianate and hot bath has never been tried in our cases. Some of the patients are so wild that I doubt if valerianate would have any effect, but in some of the milder cases it might be tried.

#### REPORT OF A CASE OF BALANCE PTOSIS.

WILLIAM S. GONNE, B.S.

(From the Neurologic Clinic, University Hospital, Ann Arbor, Michigan.)

The case, which I am about to present, is one showing a peculiar type of ptosis of the left eyelid and described in the Italian literature as "Ptosi Bilancia." This is of interest; first, on account of the rarity of this condition, no cases having been reported in the German, French or English literature; second, the diagnostic value of the symptom; and third, because of the physiologic problem which it presents.

This patient, age 41 years, a salesman, entered the Neurologic Clinic on January 20, 1917. At that time he complained of difficulty in walking, difficulty in the use of his hands, disturbance of vision and pain in the abdomen. His family history is practically negative. He has been married nineteen years and has two children, a boy and a girl, age 15 and 17 years, respectively. His wife is living and well and



there is no history of miscarriages. The patient had typhoid at 16, the ordinary diseases of childhood and an operation for hernia in 1898. He says he did not have the present trouble at that time. He does not drink but smokes moderately. He had gonorrhea in 1908, but he never has had a skin eruption and denies knowledge of syphilitic infection. He gives no history of an injury except that he cut his right wrist in 1904 by falling on broken glass.

*Present Illness.*—The patient says that he had no signs of the present trouble until June 1st, 1916 when he complained of diplopia and pain in the back. He was treated by a physician for lumbago and stomach trouble until August 10th. During this time he was becoming progressively weaker, developing difficulty in walking, numbness in the toes and then numbness in the hands and fingers. The numbness gradually crept up his body and affected the left side of his face. His vision became so poor that he could not read even with reading glasses. He says that strabismus was first noticed by his friends about August 20th. His case was diagnosed as tabes and he took his first treatment of salvarsan, intravenously, on August 21, 1916. He took two more treatments at intervals of two weeks until he had had three treatments. Between the first and second treatment the dull ache which he had in his legs changed to sharp, shooting pains accompanied by similar pains in other parts of his body. His weakness was becoming worse and his vision was not improved. He took the second injection of salvarsan at 10 A. M., Sept. 4, and about 11:30, while riding in an automobile from the doctor's office to that of an optician's, he suddenly developed ptosis of the left eyelid. He could not open his eye to have glasses fitted except by holding it open. When he reached home that evening he noticed that if he closed the right eye he could open the left, but with the right eye open he could not open the left. When he opened his left eye he says he had a feeling of dizziness and pressure sensation in the abdomen. The following week he had a great deal of trouble with his stomach, pain in the abdomen, retention of urine, constipation and loss of vision. At this time he walked with two canes. He was catheterized daily for ten days. He took his third treatment of salvarsan two weeks after the second and three or four days after this treatment he started to treat himself by taking very hot baths. From that time his general condition gradually improved and he was able to get about in three

weeks, but his eye condition remained unchanged. He says he had never had blood taken for examination and no spinal puncture until he entered the Hospital.

Examination on admission to the Hospital by Dr. Camp showed that the patient was a somewhat spare individual who replied promptly to questions and seemed to be mentally normal except for some slight confusion and memory disturbance, though the latter was not appreciated by the patient. He could walk without a cane, though his gait was staggering. When both eyes were closed his gait was more ataxic and staggering. There was a ptosis of the left eye and the left eyeball showed a slight divergent strabismus. The inward rotation of the left eyeball was impaired, but other extraocular movements of both eyes were normal. Convergence in both eyes was normal. The right pupil reacted promptly to light, the left sluggishly. When he closed the right eye the left upper lid raised without effort and the eye was opened to almost the full extent. With the right eye opened the left could not be raised at all. There was no facial palsy or asymmetry and the tongue was protruded straight and showed no atrophy. There was some ataxia in the use of both hands. There was atrophy of the thenar eminence and small muscles of the right hand and the little finger of the right hand was contracted in flexion. There was numbness in the distribution of the ulnar nerve but this atrophy and sensory disturbance was probably accounted for by an injury to the right ulnar nerve just above the wrist joint. There was no atrophy nor deformity of the left hand. The biceps and triceps, knee and Achilles reflexes were absent on both sides. Plantar irritation caused no movement of the toes on the left side, but normal flexion on the right side. The tendo Achilles were normally tender to pressure and there was no objective sensory disturbance in the feet, either tactile or pain. There was no loss of sense of motion or position of the toes and no atrophy nor deformity of the feet. The umbilical reflex was present on both sides, but the cremasteric reflex was absent.

The physical condition was good and the examination of the heart and lungs was negative. An examination of the abdomen showed an inguinal hernia on the right side, but the X-ray examination of the gastrointestinal tract showed no interference with function. The examination of the blood showed 6,120,000 red blood cells per cmm., 8,000 leucocytes per cmm., 90 per cent. hemoglobin. The blood pressure was

130 systolic and 95 diastolic. The Wassermann reaction on the blood was negative. An examination of the urine was negative. An X-ray examination of the skull showed no pathologic condition. A lumbar puncture was done on his admission. The spinal fluid was clear and colorless and under normal pressure. It showed 115 lymphocytes per cmm. The carbolic reaction of Pandy was strongly positive. Nonne-Apelt, Phases I and II were slightly positive. Reducing substance was present. The Wassermann reaction was strongly positive. A second lumbar puncture was done February 20, 1917. The findings were practically the same. The Wassermann reaction was strongly positive. He was examined in the Department of Ophthalmology (Dr. Parker) February 1st, 1917 with the report of "Partial loss of power of all extrinsic muscles in the left eye supplied by the third nerve, most marked in the internal rectus. Also slight loss of power in the right internal rectus. Partial ptosis in the left eye. Well marked disseminated choroiditis probably specific."

The patient had an injection of mercury succinimid, grain  $\frac{1}{5}$ , on January 28th and daily thereafter and he was able to raise the left lid about five days later. He has continued to improve since then until at present there is only a barely perceptible ptosis in the left eye and in all other respects his eyes are negative. The tendon reflexes are still lost. He has an ataxic gait which is made worse by closing the eyes, though not made worse by closing either eye alone. He has no pains of any kind at the present time.

In résumé we would say that this case shows incomplete paralysis of the left third cranial nerve, manifesting itself as balance ptosis together with other neurologic symptoms of syphilis of the nervous system and positive findings in the spinal fluid. This is quite similar to the case of "Ptosis Bilancia" reported by Artom in *II Polyclinico Practica*, 1913. The diagnosis of syphilitic basilar meningitis was made by Artom by a process of exclusion.

There were also three cases reported by Pacetti as *tabes paresis* and *taboparesis* in which there was inability to raise one eyelid when the other was open, but it could be raised when the other lid was closed. In no case of this kind has there been reported, heretofore, an examination of the spinal fluid.

This peculiar type of ptosis may be explained as a sign of syphilis of the central nervous system. It may be thought to be due to the reflex

action on the part of the patient to prevent diplopia, but one objection to this latter view is that in a reflex closure of the eye there is a spasm of the orbicularis palpebrarum which is not supplied by the third nerve, but by the facial. There was no indication of facial spasm in this case. Another objection is that although diplopia is common, a balance ptosis is extremely rare. The pathogenesis of this symptom and its bearing on our knowledge of the associated ocular movements is to be taken up in another paper.

#### DISCUSSION.

DR. GRADY E. CLAY: I do not know just what is meant by balance ptosis. This interesting case shows a definite partial paralysis of the third nerve supplying the muscles of the right eye and the reason that this patient is able to raise the right lid when the left eye is closed is explained by the fact that an increase of nerve supply is sent to the partially paralyzed levator. The loss of vision in this case is due to the specific choroiditis.

DR. CARL D. CAMP: The case interests me a great deal. Dr. Clay's explanation, it seems to me, is a perfectly reasonable one, in fact, was the original explanation of Pacetti, that is, that there was deficient innervation to the left oculomotor nucleus, and unless the right eyelid was dropped so that all the innervation possible could get to the left oculomotor nucleus, the patient was unable to raise the left eyelid. Of course, that involves a theory of the relations of the oculomotor nuclei which is not altogether clear. The extreme rarity of this condition is, I think, very well attested. There is practically no mention of it in the literature, and yet it is such a striking phenomenon that one would think that if cases of this kind had occurred, they surely would have been reported in the literature. There is no mention of such a condition for instance in the large system of Wilbränd and Sängner on the neurology of the eyes.

MR. WILLIAM S. GONNE: In looking up a little on the physiology of this phenomenon, I discovered a variety of opinions upon the structure and function of the third nerve nucleus and I imagine it is going to be a very interesting subject to work up.

#### UTERINE FIBROMYOMATA COMPLICATING PREGNANCY; WITH THE REPORT OF A CASE.

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(From the Clinic of Obstetrics and Gynecology, University Hospital, Ann Arbor, Michigan.)

Uterine fibromyomata are in a large percentage of cases associated with sterility. They may, but rarely do, cause disturbance during pregnancy, labor or the puerperium. In large series from the maternity clinics fibroids are



found in from .7 to 1 per cent. of cases, yet they require interference in less than .02 per cent.

During pregnancy fibroids increase rapidly in size, due to the greatly increased vascularity of the pelvis. They may cause abortion, overdistension of the abdomen from rapid growth, pain, fever, and peritonitic symptoms from necrosis, incarceration, twisting of the pedicle, or other degenerative changes.

During labor fibroids remaining incarcerated in the pelvis (particularly pedunculated, intraligamentous, cervical, or adherent types) produce dystocia. Fundal growths cause no difficulty as a rule. Those of the intermediate zone are usually drawn out of the pelvis by the retracting musculature. Malpositions, and malpresentations are, however, fairly common, and placenta previa is unusually frequent.

Complications of the third stage of labor are common, namely, hemorrhage from poor retraction of the uterus, or adherent placenta.

During the puerperium fibroids may obstruct the lochial flow; they always delay involution; they predispose to thrombophlebitis, and may become infected and necrotic from the injury and bruising incident to delivery.

Of late years the cases are neither so frequent nor so formidable because most of the tumors are removed when first discovered, and further, better aseptic treatment is given at the time of labor.

The following case has been recently under observation in the Gynecological Clinic:

Miss S., age 30, entered the Hospital February 19th, 1917. Her complaint was a tumor mass in the abdomen associated with pregnancy. Her last menstrual period was July 30th, 1916, and she felt fetal movements about December 10th. The tumor was first noticed by the patient in May, 1915, as a small, round, movable mass in the left lower abdomen which disappeared, when she would lie on her left side, or back. Otherwise she was healthy in every respect, and her menstrual history was normal. The mass grew slowly until she was two months in her pregnancy, and at that time seemed about the size of an orange, and was somewhat irregular. From that time the growth rapidly increased in size, and on admission was found to occupy practically the entire left half of the abdomen, and extended from the pubis to beneath the left costal margin. The upper border of the growth was distinctly notched and it had a uniformly firm hard feel. It was apparently movable, but not freely so, due to its size, and

also to the presence of a seven months pregnant uterus which was displaced to the right side of the abdomen. Upon vaginal examination the tumor mass could be felt occupying the left side of the pelvis, and could be displaced upward but very slightly. Thus far during her pregnancy the patient had enjoyed good health, and had had no unusual symptoms except for several severe, sharp pains in her right lower quadrant, two weeks previous. Physical examination was also negative in all other respects.

In making a differential diagnosis of an abdominal tumor in pregnancy, one must consider all possibilities, namely, tumors of splenic, renal, ovarian and uterine origin in particular, as well as other more rare intraabdominal growths. Here, the history was suggestive of pelvic growth and our diagnosis lay between pedunculated uterine fibroid and fibroid of the ovary. By careful blood, urine, and X-ray examination of the kidney we ruled out, as well as one may, the other possibilities. The growth simulated an ovarian fibroid greatly in its consistency, kidney shape outline and movability.

Where one is dealing with a complication of pregnancy of this type, there are two main possibilities of treatment. From its size and location in the pelvis, with the accompanying displacement of the fetus to the right side of pelvis and abdomen, dystocia at time of labor could be definitely prognosticated. Also complications prior to labor were quite possible. The treatment for these reasons was fairly well defined; first, immediate removal of the mass by laparotomy, with as little trauma to the pregnant uterus as possible, and allowing pregnancy to continue; or, secondly, to allow pregnancy to continue further toward term in the interest of the fetus, and then do a classical Cesarean, followed by the removal of the mass. In case of proper indication a Porro operation might have been done.

The first line of treatment seemed the most conservative, and according to Patton is the procedure of choice in such cases. The patient was operated upon March 2nd; the abdomen was opened by a high left rectus incision  $7\frac{1}{2}$  inches in length, and the tumor mass was delivered with difficulty, although not adherent. It was a large solid irregular fibroid, measuring  $8 \times 6 \times 4$  inches, and was attached to the anterior left aspect of the lower portion of the fundus by a large pedicle, about one-half inch in length. The uterus was, otherwise, normal. The pedicle was carefully dissected from the outer layers of the uterine wall, hemorrhage,

which was very brisk, being controlled by pressure, as the pedicle was too large to be clamped. The uterine wall was then repaired, the abdomen sponged dry of blood and closed in the usual manner. The patient was returned to bed in good condition, with a pulse rate of 120.

The following morning, although morphia had been administered systematically, she developed uterine contractions. These could not be arrested. Her labor was carefully supervised as the possibilities of rupture of the abdominal incision, or uterine wound were present. Her labor progressed normally as an occiput right anterior, and delivery was accomplished spontaneously late in the afternoon. Had there been delay in cervical dilatation, or had other untoward symptoms arisen, assistance to delivery would have been rendered. The third stage of labor was also normal, and was completed without difficulty. The child was a small, poorly

nourished, premature female weighing three and one-half pounds, and measuring 37 cm. in length, and survived for five hours. The patient is now rapidly undergoing a normal convalescence, and has had no complications.

According to the statistics, abortion or premature labor follow myomectomy in from 17 to 20 per cent. of cases. Particularly is this true when pregnancy is advanced more than five months and where the uterine wall is traumatized to any extent. Had there been a fair chance for delivery at term through the birth canal, either spontaneous or operative, with less danger to the mother, our treatment would have been otherwise. This tumor seemed too large to be displaceable out of the pelvis, either spontaneously following uterine contractions, or bimanually at time of labor, and was apparently a growth of the "galloping type" of Pozzi.

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*Ichthytar.*—The Council on Pharmacy and Chemistry reports that Ichthytar was submitted by the Szel Import and Export Company with the claim that it was essentially similar to ichthyol in composition and superior to it in therapeutic properties. The statements that were submitted regarding its composition made it impossible to determine whether or not it was similar to or identical with ichthyol. No evidence was furnished in regard to its therapeutic value. On the basis of the available information the Council held the claims regarding composition and therapeutic value unsubstantiated and ichthytar ineligible for New and Nonofficial Remedies. (*Jour. A.M.A.*, March 10, 1917, p. 796).

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*Another Shortage of Salvarsan.*—The indications are that the supply of salvarsan and neosalvarsan in this country has again reached the point of exhaustion. Congress, which made our patent law, has the power to suspend the patent on any preparation that the patentee is unable to, or does not supply, when such suspension is in the interest of public health, and it should suspend the salvarsan patent. In the meantime it is hoped that the Dermatologic Research Laboratory of Philadelphia will again supply the product as it did during the previous salvarsan shortage (*Jour. A.M.A.*, March 10, 1917, p. 785).

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*Control of Intestinal Bacteria.*—A recent investigation indicates that the direct feeding of bacterial cultures of lactic acid producing organisms had almost no influence on the intestinal flora. On the other hand the administration of milk sugar (lactose) brought about a marked change in the in-

testinal flora. It appears therefore that the beneficial action of milk cultures is dependent on the lactose and not on the bacteria which they contain (*Jour. A.M.A.*, March 24, 1917, p. 918).

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*Betaine Hydrochloride.*—It contains 23.8 per cent. absolute hydrochloric acid and 8 grains corresponds to about 18 minims of diluted hydrochloric acid. In solution betaine hydrochloride dissociates into hydrochloric acid, but it is not so efficient in aiding the action of pepsin as an equivalent amount of hydrochloric acid (*Jour. A.M.A.*, March 24, 1917, p. 931).

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*Active Principle of Leeches.*—The principle in the buccal secretion of the leech which prevents the clotting of blood is herudin, a deuterio-albumose (*Jour. A.M.A.*, March 24, 1917, p. 931).

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*Paraffin Films.*—The popular propaganda for "Ambrine" having brought the paraffin film treatment of burns into prominence, Torald Sollmann has instituted experiments to devise a suitable, open formula preparation which is simple and yet meets all requirements. He suggests that surgeons who desire to experiment with the paraffin treatment of burns use simple preparations of known composition. Ordinary paraffin melting at about 50 C. (122 F.) appears to possess practically the mechanical properties of "Ambrine." A mixture containing some asphaltum (asphalt varnish, Trinidad or Bermudez, "asphalt cement" and Texas asphalt were tried) gives a preparation of superior pliability. Other formulas are given and their trial suggested (*Jour. A.M.A.*, April 7, 1917, p. 1037).



# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

---

Arthur M. Hume, Chairman .....Owosso  
 Guy L. Kiefer .....Detroit  
 W. J. Kay .....Lapeer  
 W. J. DuBois .....Grand Rapids

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### EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.  
 Grand Rapids, Mich.

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All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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June

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### Editorials

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#### SPECIAL MEETING.

The full report of the special meeting of our State Society that was held in Battle Creek on May 10th will be found elsewhere in this issue. It is complete in detail and but little editorial comment is required.

It was a most splendid response and expression by our members and all doubt was dispelled as to the loyalty of Michigan doctors to their Country and Flag. The registration was larger than several of our regular annual meetings.

When President Biddle, in his address, announced:

“I want you to appreciate that those of you who go away will have the care and the guidance of this Society. I swear to you that these children shall be taken care of and everything looked after properly.”

hardly an eye in the entire assembly but what a tear glistened or trickled down the cheek.

It is now incumbent upon our members to buckle down to the tasks before us. Going or staying, we all have new duties to assume. May we co-operatively achieve the tasks allotted to us.

#### TO OUR VOLUNTEERS.

You have responded to Our Country's Call and have rallied under its flag. You are ready to go when and wherever needed. You have already exemplified the loyalty of our profession. We salute you with deference and pride. We are assured you will return honor to our organization and justify our confidence in you.

As you go forth you carry with you the universal good wishes and Godspeed of our Society and all your fellow members. When your hour of departure arrives, when you relinquish the ties of home, friends, patients, wife, children and relatives, when you set out on a service—that will lead you to we know not where—we want you to feel and be confident that you possess the combined support of our entire membership. This Society pledges to you that during your absence it will be alert to the rendering of such protection and care to your dear ones and dependents as may be required. That they will be safe-guarded from all want and their comforts will be conserved. Their interests will ever concern us and their happiness will be our quest. We ask you to be content with this knowledge and be confident that we gladly assume this trust.

Further, we want each one of you to freely convey your wishes to the State Secretary. Wherever you may be, do not for a moment hesitate to communicate with your organization's Secretary if occasion presents when you feel that we can render service, no matter how great or small that service may be.

Your Society is back of you—it will watch over yours—Good Bye, Good Luck, God Bless You.

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#### COUNTY PATRIOTIC COMMITTEES.

The plan adopted at our Special Meeting provides for the appointment by County Societies of a Patriotic Committee. The duties of these Committees are to familiarize themselves with the progress, comforts and circumstances of the families and dependents of members who are actively serving this country. They are to make monthly reports and to them is delegated the responsibility of protecting the interests and comforts of their fellow-members' families and to also tender from time to time such assistance as their needs may require.

These Committees are the protecting guardians of the families and dependents of our patriotic members who are serving their country. The personnel of these Committees should

be carefully selected. They must be impressed with the grave responsibilities that devolves upon them. They must exercise tact and discretion. They also must ever be alert and active.

County Societies should promptly arrange the appointment of this Committee and report the names and addresses of the members to the State Secretary in order that instructions may be sent to them. See that your local Committee is organized and on duty before the first doctor from your county leaves for active duty. Thus will he be assured that those whom he leaves behind are under the watchful and protecting care of his fellow-members.

We have assured the men going to the front that we would care for and protect their dear ones. This is our solemn promise. To keep it inviolate the Patriotic Committee must at once go on duty. See that this is done in your county.

#### EMERGENCY FUND ASSESSMENT.

As authorized by the House of Delegates and the General Session that adopted the plan for the Conservation of the Practices of Members Who Enter Active Service, the Financial Committee of the Council has levied an initial assessment of \$5.00 per member. The money thus acquired will be used as an Emergency Patriotic Fund to provide relief and assistance to the families and dependents of members who enter active service in the Medical Departments of the Army or Navy. The money will be disbursed by the Financial Committee upon recommendation of Local Patriotic Committees and after proper investigations.

Our members are urged to promptly pay this assessment to their County Secretaries who have been provided with blanks for forwarding their collections of this assessment. **DO IT NOW.**

#### ANNUAL MEETING.

The fall meeting has been indefinitely postponed for the present. The difficulty encountered in preparing a scientific program because of the uncertainty as to whether essayists will be in active governmental service is the principle reason for postponement. Dependent upon the trend of events, the Council will announce a future date for the holding of our annual meeting.

#### REGISTRATION—SPECIAL MEETING

##### ALPENA—

C. M. Williams, Alpena.  
D. A. Cameron, Alpena.

##### BARRY—

F. F. Shilling, Nashville.  
J. W. Rigterink, Freeport.  
H. A. Adrounie, Barry.

##### BAY—

W. E. Tupper, Bay City.  
C. H. Baker, Bay City.

##### BENZIE—

F. H. Stone, Beulah.  
E. L. Covey, Honor.  
W. P. Morrill, Benton Harbor.  
H. C. Hill, Benton Harbor.  
L. L. Harrison, Niles.  
D. Littlejohn, Bridgman.  
S. W. Barnum, Coloma.

##### BERRIEN—

C. N. Sowers, Benton Harbor.

##### BRANCH—

W. W. Williams, Bronson.  
D. H. Wood, Coldwater.  
R. W. Ridge, Coldwater.  
W. A. Griffith, Coldwater.  
P. H. Gunsaulus, Bronson.  
M. H. Coan, Union City.

##### CLINTON—

W. A. Scott, St. Johns.  
W. H. Gale, St. Johns.  
A. R. Coon, DeWitt.

##### CASS—

E. W. Tonkin, Edwardsburg.  
W. C. McCutcheon, Cassopolis.  
J. H. Kelsey, Cassopolis.  
S. L. Lopee, Vandalia.  
R. P. Jones, Marcellus.  
W. R. Beardsley, Jones.

##### CHEBOYGAN—

W. E. Chapman, Cheboygan.

##### CALHOUN—

E. Van Camp, Athens.  
L. H. Tower, Battle Creek.  
C. E. Stewart, Battle Creek.  
Carrie S. Staines, Battle Creek.  
R. C. Stone, Battle Creek.  
W. S. Shipp, Battle Creek.  
W. B. Lewis, Battle Creek.  
H. A. Shurtleff, Marshall.  
R. D. Sleight, Battle Creek.  
P. Roth, Battle Creek.  
K. B. Rees, Bedford.  
E. L. Parmeter, Albion.  
F. D. Patterson, Marshall.  
E. G. Norman, Battle Creek.  
W. H. Niles, Marshall.  
E. Miller, Battle Creek.  
H. M. Lowe, Battle Creek.  
L. McCaleb, Battle Creek.  
A. F. Kingsley, Battle Creek.  
A. S. Kimball, Battle Creek.  
L. Jespersen, Battle Creek.  
S. Jespersen, Battle Creek.  
Chas. C. Hubly, Battle Creek.  
E. C. Derickson, Burlington.  
W. H. Haughey, Battle Creek.  
W. Haughey, Battle Creek.  
J. J. Holes, Battle Creek.  
G. C. Hafford, Albion.  
C. S. Gorsline, Battle Creek.  
W. L. Godfrey, Battle Creek.  
J. G. Gage, Battle Creek.  
L. Fraser, Battle Creek.  
J. A. Elliott, Battle Creek.  
M. V. Dryden, Battle Creek.  
J. F. Cooper, Battle Creek.  
M. N. Canfield, Battle Creek.  
E. M. Chauncey, Albion.  
S. K. Church, Marshall.  
J. T. Case, Battle Creek.  
R. H. Baribeau, Battle Creek.



## CHARLEVOIX—

A. N. Howe, Boyne City.  
A. M. Wilkinson, Charlevoix.

## DICKINSON—

J. A. Crowell, Iron Mountain.

## DELTA—

H. W. Long, Escanaba.

## EMMET—

F. C. Witter, Petoskey.

## EATON—

C. A. Stimson, Eaton Rapids.  
C. S. Sackett, Charlotte.  
V. J. Rickard, Charlotte.  
W. E. Newark, Charlotte.  
P. H. Quick, Olivet.  
E. M. McCoy, Grand Ledge.  
F. J. Knight, Charlotte.  
A. H. Burleson, Olivet.  
F. R. Blanchard, Eaton Rapids.

## ISABELLA—

Chas. D. Pullen, Mt. Pleasant.  
J. H. Moseley, Weidman.

## GRATIOT—

H. Moseley, Alma.  
B. C. Hall, Pompeii.  
C. B. Gardner, Alma.  
D. H. Anderson,

## GENESEE—

A. S. Wheelock, Goodrich.  
W. H. Winchester, Flint.  
P. E. White, Clio.  
D. L. Treat, Flint.  
V. H. De Somoskeoy, Flint.  
E. C. Rumer, Flint.  
A. J. Reynolds, Flint.  
H. E. Randall, Flint.  
W. C. Reid, Grand Blanc.  
E. D. Rice, Flint.  
C. H. O'Neil, Flint.  
R. S. Morrish, Flint.  
C. F. Moll, Flint.  
J. G. R. Manwaring, Flint.  
D. D. Knapp, Flint.  
R. S. Halligan, Flint.  
M. S. Knapp, Flint.  
G. R. Gocring, Flint.  
J. W. Evers, Flint.  
H. Cook, Flint.  
C. D. Chapell, Flint.  
C. P. Clark, Flint.  
J. C. Benson, Flint.  
G. H. Bahlman, Flint.  
C. B. Burr, Flint.

## GRAND TRAVERSE—

E. L. Thirlby, Traverse City.  
L. Swanton, Traverse City.  
F. P. Lawton, Traverse City.  
F. Holdsworth, Traverse City.

## GOGEBIC—

L. O. Houghten, Bessemer.  
C. D. Collins, Ironwood.

## HURON—

S. B. Young, Caseville.  
A. E. Yale, Pigeon.

## HILLSDALE—

W. H. Sawyer, Hillsdale.  
B. F. Green, Hillsdale.  
H. C. Miller, Hillsdale.  
C. L. Bower, Hillsdale.  
W. O. Ditmars, Jonesville.  
W. H. Atterbury, Litchfield.  
O. G. McFarland, Montgomery.

## IONIA—

J. E. Pinkham, Belding.  
Joseph Johns, Ionia.  
N. McLaughlin, Lake Odessa.  
J. J. McCann, Ionia.  
F. M. Marsh, Ionia.  
V. H. Kitson, Ionia.  
F. A. Hopkins, Muir.  
R. H. Haskell, Ionia.

J. R. Hay, Saranac.  
C. B. Gauss, Palo.  
J. J. Defendorf, Ionia.  
J. D. Bradfield, Portland.  
E. F. Beckwith, Ionia.

## INGHAM—

L. W. Toles, Lansing.  
M. Shaw, Lansing.  
C. H. Murphy, Lansing.  
R. E. Miller, Lansing.  
H. A. Miller, Lansing.  
F. A. Jones, Lansing.  
F. M. Huntley, Lansing.  
F. J. Drolett, Lansing.  
O. H. Bruegel, Lansing.  
H. S. Bartholomew, Lansing.

## JACKSON—

W. B. Anderson, Jackson.  
R. M. Cooley, Jackson.  
C. A. Clarke, Jackson.  
H. D. Brown, Jackson.  
C. R. Dengler, Jackson.  
W. H. Enders, Jackson.  
P. I. Edwards, Jackson.  
J. C. Kugler, Jackson.  
C. A. Leonard, Jackson.  
T. E. Hackett, Jackson.  
L. J. Harris, Jackson.  
R. G. Hendrick, Jackson.  
B. D. Marsh, Jackson.  
C. D. Munro, Jackson.  
J. A. McQuillan, Jackson.  
H. N. T. Nichols, Jackson.  
C. G. Parnall, Jackson.  
E. S. Peterson, Jackson.  
D. E. Robinson, Jackson.  
F. L. Rose, Jackson.  
G. A. Seybold, Jackson.  
W. R. Snow, Jackson.  
W. E. Spicer, Jackson.  
C. E. Stewart, Jackson.  
M. C. Strong, Jackson.  
J. C. Smith, Jackson.  
E. C. Taylor, Jackson.  
G. E. Winter, Jackson.

## KENT—

J. D. Brook, Grandville.  
F. A. Boet, Grand Rapids.  
B. R. Corhus, Grand Rapids.  
A. M. Campbell, Grand Rapids.  
L. H. Chamberlain, Grand Rapids.  
W. J. DuBois, Grand Rapids.  
R. W. Fuller, Grand Rapids.  
F. C. Kinsey, Grand Rapids.  
A. Nyland, Grand Rapids.  
H. J. Pyle, Grand Rapids.  
J. R. Rogers, Grand Rapids.  
Perry Schurtz, Grand Rapids.  
D. E. Welsh, Grand Rapids.  
J. B. Whinery, Grand Rapids.  
F. C. Warnshuis, Grand Rapids.

## KALAMAZOO ACADEMY—

R. U. Adams, Kalamazoo.  
C. E. Boys, Kalamazoo.  
E. E. Brunson, Ganges.  
E. T. Brunson, Ganges.  
H. J. Bush, Fennville.  
R. E. Balch, Kalamazoo.  
L. J. Crum, Kalamazoo.  
D. H. Eaton, Kalamazoo.  
A. W. Crane, Kalamazoo.  
J. B. Jackson, Kalamazoo.  
W. N. Kenzie, Richland.  
H. W. Knapp, Gaylord.  
R. G. Leland, Kalamazoo.  
D. P. Osborne, Kalamazoo.  
H. Ostrander, Kalamazoo.  
R. McNair, Kalamazoo.  
Elmer D. Osmun, Allegan.  
F. U. Pratt, Kalamazoo.  
A. L. Robinson, Allegan.  
A. H. Rockwell, Kalamazoo.  
E. P. Wilbur, Kalamazoo.  
G. F. Willey, Kalamazoo.  
R. J. Walker, Saugatuck.

## LAPEER—

J. H. Burley, Almont.  
D. J. O'Brien, Lapeer.  
Peter Stewart, Lapeer.  
P. E. Marsh, Lapeer.  
W. J. Kay, Lapeer.  
H. H. Merriman, Lapeer.

## LIVINGSTON—

C. L. Sigler, Pinckney.

## LENAWEE—

A. W. Chase, Adrian.

## MECOSTA—

C. F. Karshner, Big Rapids.

## MARQUETTE-ALGER—

A. W. Hornbogen, Marquette.  
V. H. Vandeventer, Ishpeming.

## MUSKEGON-OCEANA—

B. R. Eastman, Muskegon.  
W. L. Griffin, Shelby.  
F. W. Garher, Muskegon.  
I. M. J. Hotvedt, Muskegon.  
Geo. L. LeFevre, Muskegon.

## MANISTEE—

E. S. Ellis, Manistee.  
J. A. King, Manistee.  
L. S. Ramsdell, Manistee.  
H. A. Ramsdell, Manistee.

## MONROE—

L. C. Knapp, Monroe.  
W. F. Acker, Monroe.  
C. T. Southworth.

## MACOMB—

H. G. Berry, Mt. Clemens.  
J. M. Croman, Mt. Clemens.  
E. J. Miller, Romeo.  
W. R. T. Sharpe, Romeo.  
M. C. Smith, Romeo.  
George Waters, Memphis.

## MONTCALM—

L. E. Kelsey, Lakeview.

## MIDLAND—

E. J. Dougher, Midland.  
J. H. Johnson, Midland.

## OTTAWA—

T. A. Boot, Holland.  
H. Boss, Holland.  
Joe De Pree, Zeeland.  
J. J. Mersen, Holland.  
A. Leenhouts, Holland.  
R. H. Nichols, Holland.  
G. H. Thomas, Holland.

## OAKLAND—

G. W. MacKinnon, Oxford.

## ONTONAGON—

E. J. Evans, Greenland.  
F. W. McHugh, Ontonagon.

## PRESQUE ISLE—

W. W. Arscott, Rogers.

## ST. CLAIR—

B. E. Brush, Port Huron.  
J. L. Chester, Emmett.  
T. F. Heavenrich, Port Huron.  
Alex. J. MacKenzie, Port Huron.  
C. B. Stockwell, Port Huron.

## SAGINAW—

Geo. L. Alger, Saginaw.  
D. E. Bagshaw, Saginaw.  
N. R. Bradley, Saginaw.  
J. D. Brule, Saginaw.  
Geo. A. Bell, Saginaw.  
W. H. Brock, Saginaw.  
E. E. Curtis, Saginaw.  
W. A. DeFoe, Saginaw.  
W. F. English, Saginaw.  
G. H. Furgeson, Saginaw.  
L. B. Harris, Saginaw.  
E. C. Kinsman, Saginaw.  
M. Kollig, Saginaw.  
A. E. Leitch, Saginaw.

A. R. McKinney, Saginaw.  
H. J. Meyer, Saginaw.  
J. H. Powers, Saginaw.  
E. P. W. Richter, Saginaw.  
B. B. Rowe, Saginaw.  
C. H. Sample, Saginaw.  
J. T. Sample, Saginaw.

## ST. JOSEPH—

W. E. Doran, Colon.  
P. L. Hartman, Colou.  
D. M. Kane, Sturgis.  
J. R. Klingsley, Three Rivers.

## SHIAWASSEE—

J. J. Haviland, Owosso.  
A. M. Hume, Owosso.

## SANILAC—

Hugh H. Angle, Snover.

## TUSCOLA—

W. C. Garvin, Millington.

## TRI COUNTY—

S. C. Moore, Cadillac.  
R. J. E. Oden, Cadillac.  
B. H. McMullen, Cadillac.  
O. L. Ricker, Cadillac.  
W. J. Smith, Cadillac.  
A. E. Stickley, Mesick.

## VAN BUREN—

G. F. Young, South Haven.  
F. S. Penoyer, South Haven.  
O. M. Vaughan Jr., Covert.  
J. W. Hawkey, Bloomingdale.

## WASHTENAW—

N. B. Foster, Ann Arbor.  
L. H. Newburgh, Ann Arbor.  
Reuben Peterson, Ann Arbor.  
C. L. Washburne, Ann Arbor.  
H. W. Schmidt, Chelsea.

## WAYNE—

R. C. Andries, Detroit.  
W. L. Bahcock, Detroit.  
G. J. Baker, Detroit.  
J. N. Bell, Detroit.  
C. D. Brooks, Detroit.  
H. R. Carstens, Detroit.  
J. H. Dempster, Detroit.  
G. E. Frothingham, Detroit.  
C. W. Hitchcock, Detroit.  
N. W. Hoskln, Detroit.  
C. F. Kuhn, Detroit.  
W. K. Kwiecinski, Detroit.  
A. F. Jennings, Detroit.  
C. G. Matthews, Detroit.  
J. S. Matthews, Detroit.  
J. O. MacMillan, Detroit.  
E. W. Mooney, Detroit.  
W. H. Morley, Detroit.  
W. R. Parker, Detroit.  
H. W. Peirce, Detroit.  
H. H. Runo, Detroit.  
F. R. Starkey, Detroit.  
C. H. Stiles, Detroit.  
J. W. Vaughan, Detroit.  
W. T. Wilson, Jr., Detroit.  
F. B. Walker, Detroit.  
J. V. White, Detroit.  
S. F. Wilson, Detroit.  
Harold Wilson, Detroit.  
R. Kirke Young, Detroit.  
H. W. Yates, Detroit.

## MEMBERS FROM OUTSIDE OF STATE—

T. J. Cree, Angola, Ind.  
P. N. Sutherland, Angola, Ind.  
Alex. R. Craig, Secretary A. M. A., Chicago.



## Deaths

**Dr. Marden Sabin** of Centerville died on April 11th, at the home of his son in Battle Creek. For a half century Dr. Sabin had been engaged in the practice of medicine in the vicinity of Centerville and was highly esteemed by all who knew him.

**Dr. C. P. Brown** of Spring Lake died on May 4th, of pneumonia. He was a veteran physician of Ottawa county and was prominent in matters pertaining to public interests.

**Dr. F. E. Ruggles** of Bay City died on April 16th, after an illness of six days of pneumonia. He was 48 years old and was a resident of Bay City for twenty-two years. He was an influential and prominent member of the Bay County Medical Society and had gained a wide practice in Bay City. His death was a great shock to the community.

**Dr. J. A. McPherson** of Grand Rapids died after an illness of long duration. He was one of the best known physicians of this city having lived here since 1870.

We have also the report of the death of Dr. Wm. Dean Wilson of Detroit, Dr. Richmond Simmons of DeWitt and Dr. B. Scoville of Constantine, not members of the Society.

## State News Notes

Announcement—On account of ill health and age, I must give up the practice of my profession. Will dispose of office equipment at a very low valuation. Good library, electrical apparatus and surgical instruments. Located in Lansing, Michigan. Address 427 Seymour street or 212½ South Washington avenue.

A. D. HAGADORN, M.D.

**WANTED**—A competent physician to locate in a thriving village of Western Michigan. For particulars address No. 20, care *Journal*, M. S. M. S., 513 Powers Theatre Building, Grand Rapids Mich.

*The Modern Hospital* (Chicago and St. Louis) announces that its June issue will be devoted to the subject of Occupational Therapy and Occupations for the Handicapped. The importance of this subject has not been sufficiently realized until com-

paratively recent times. Of late the nations at war have come to recognize the therapeutic and economic necessity of providing suitable occupations for those of their wounded and injured who are able to work. This necessity is just as urgent in the case of the handicapped class in civil life.

Among the subjects of important papers to be published in the Occupational Therapy number are "History of Occupational Therapy," by Dr. W. R. Dunton, Jr., assistant physician, Sheppard and Enoch Pratt Hospital, Towson, Md.; "The Potteries of Arequipa Sanatorium, an Experiment in the Re-education of Tuberculous Girls," by Dr. Philip King Brown, medical director of Arequipa Sanatorium, manor, Cal.; "Remunerative Occupations for the Handicapped," by Dr. Herbert J. Hall, physician in charge, Devereux Mansion, Marblehead, Mass.; "Occupation Therapy in the Mental Hospital," by Dr. A. H. Ruggles, first assistant physician, Butler Hospital, Providence, R. I.; "Occupation and Diversion of Tuberculous Patients," by Dr. A. T. Laird, superintendent Nopeming Sanatorium, Nopeming, Minn.; "Work in the Treatment of Insane Criminals," by Dr. Paul E. Bowers, medical superintendent Indiana Hospital for Insane Criminals; "Some Principles of Occupational Therapy," by Miss Elizabeth Upham, director of art department, Milwaukee-Downer College, Milwaukee; "The Inoculation of the Bacillus of Work," by Mr. George Edward Barton, director of Consolidation House, Clifton Springs, N. Y.

Another important feature of the June issue of *The Modern Hospital* is to be a paper prepared by Miss Alice F. Bell under the auspices of the department of nursing, Teachers College, Columbia University, on the standardization of records in training school for nurses. This is work for which there has long been a crying need. It is believed that the system outlined in this paper will be of epoch-making importance in nursing education.

The following telegram to Dr. Angus McLean of Detroit:

### ORDER FOR SERVICE.

"Submit by telegraph to this office names of reserve officers under 35 years of age, who have accepted commissions for duty in Europe. Ten to sail in June, ten in July and ten in August. Select without regard to rank, but only those who will be a credit to the service. Names of the reserve officers to be in this office at least fifteen days prior to the first of the month in which they are to sail. Officers should provide themselves with field equipment."

The war department has decided to send 1,700 doctors from this country to the battlefields and Michigan's quota is thirty. Lieutenant Colonel Mc-

Lean has not selected the first ten Detroit doctors to go, but he expects to have the list ready by Monday. There are a number of Detroit doctors anxious to get the first assignment to France and Dr. McLean could pick a much larger number of surgeons than demanded by the war department without any trouble. General Gorgas demands the doctors selected shall not be older than 35 years.

Lieutenant Colonel McLean received a telegram from Major Stephenson of the military headquarters of the central division at Chicago Friday, which makes it apparent his base hospital unit will be ordered to the front as soon as it is ready.

#### TELEGRAPHIC INSTRUCTIONS.

The telegram is as follows:

"Wire immediately name of medical reserve officer of your staff for active duty to recruit enlisted personnel of base hospital No. 17."

Dr. McLean immediately appointed Major George Kean, director of the medical division, of Harper Base Hospital Unit No. 17, and he will go into active duty Saturday. He will be assisted by Drs. Alexander Stirling and John C. Dodds. The work of physically examining the enlisted personnel of Harper Base Hospital unit will start Saturday at Harper hospital.

Members of the board of trustees of the Children's Free hospital announce the appointment of thirty-six doctors to its medical staff. Following are their names and the departments to which they have been assigned:

Drs. C. G. Jennings, Hugo Freud, A. D. Holmes, A. P. Biddle, Charles W. Hitchcock, Guy L. Kiefer, consulting physicians; Drs. T. A. McGraw, J. K. Gailey, Max Ballin and Daniel La Ferte, consulting neurologist; Dr. B. R. Hoobler, director of medical service; Drs. Grant McDonald, Frederick B. Burke and J. H. Polozker, attending physicians; Dr. George Sewell, skin and contagious diseases; Dr. Walter King, pathologist and bacteriologist; Dr. H. A. Reye, neurologist; associates, Drs. H. A. McFayden, Worth Ross, George Van Rhee; Drs. A. D. McAlpine, H. N. Torrey, W. J. Cassidy, G. C. Pemberthy, A. F. Naylor, A. M. Sterling and H. S. Karr, general surgical service; Drs. F. C. Kidner and A. D. LaFerte, orthopedic service; Drs. B. R. Shurly, W. A. Defnet, laryngological service; Drs. Walter R. Parker, Ray Connor, G. M. Waldeck, ophthalmology and otology.

Unit of twenty surgeons from all over the United States in command of Major J. E. Goldthwait of Boston go to England to do reconstructive surgery under Major General Robert Jones of Liverpool. Major General Jones is in charge of all the reconstructive surgical work of England.

The unit will be placed on active duty in the hospitals. They go in answer to a direct appeal from the English Medical Service for more trained men in orthopedic surgery. Dr. Goldthwait will study conditions in England and France and will

then return to America to organize re-constructive hospitals for the American Army. When this is done, the surgeons accompanying him will probably be brought back to take charge of these institutions. Dr. F. C. Kidner of Detroit was the only man selected from Michigan to accompany this unit.

**Insurance Policies.**—We urge that every member entering the Reserve Corps take his life insurance policy to the agent of the company and have its war clauses interpreted. Do not neglect to maintain your protection or invalidate your policy. Insurance companies are also issuing special policies covering war risks. Be sure and investigate these provisions and secure the proper endorsements.

We are arranging to have a correspondent with each of the two Detroit Base Hospitals and with the Grand Rapids Hospital Unit. We also will be pleased to receive communications for publication from other members in the service. The men at home will be interested in your work.

The Alumni Clinic Week of the Detroit College of Medicine and Surgery has been abandoned for this year. The annual meeting of the Alumni is to be held Friday evening, June 1st. Commencement exercises will be held on the evening of June 2.

Dr. Frederick R. Waldron of Ann Arbor announces the opening of offices in the David Whitney building, Detroit. Practice limited to the treatment of genito-urinary diseases.

Dr. Leo C. Donnelly announces his return from France and the opening of offices at 727 Jefferson avenue East, Detroit. Practice limited to orthopedic surgery and X-ray diagnosis.

The sixty-eighth annual meeting of the American Medical Association will be held in New York City, June 4 to 8. In place of the President's reception it is planned to hold a patriotic meeting.

Do not forget to patronize our advertisers. Now if ever do they merit your patronage because they are making your journal possible. With the high cost of all commodities we need this support from our members.

Dr. H. M. Hume of Owosso was elected Vice-President of the American Railway Chief Surgeon's Association at the annual meeting held in Chicago, May 7th.

Dr. Wilfrid Haughey and Dr. J. T. Case have been appointed as members of examining board for the Medical Officer's Reserve Corps for Battle Creek and vicinity.

Dr. Carl Moll of Flint has been appointed Local Surgeon of the Pere Marquette R. R., vice J. G. R. Manwaring resigned.



**FOR SALE**—Betz No. 1, Static and X-ray Machine in good condition at half price. Apply: Dr. J. M. Stone, Honor, Mich.

The American Proctological Society will hold its annual meeting in New York, Hotel Astor, June 4 and 5.

Dr. A. S. Warthin, Ann Arbor, was one of the essayists at the annual meeting of the Illinois State Medical Society held in Bloomington on May 9th.

Dr. J. C. Kenning, attached to Grand Rapids Naval Militia has been ordered to report for duty on May 30th.

Dr. C. C. Slemons has been appointed full time health officer under the new commission form of government in Grand Rapids.

Dr. J. T. Case of Battle Creek has been made an honorary member of the Academy of Medicine of Porto Rico.

Dr. W. D. Meller, assistant superintendent of the Traverse City State hospital has been granted a leave of absence to enlist in the army medical corps.

Dr. M. M. Wickware of Caro has been appointed Supreme Medical Examiner of the Gleaners in place of Dr. S. F. Chase.

Dr. W. De Kleine has been elected as Health Officer of Flint.

The State Homeopathic Society held its annual meeting in Detroit on May 4th.

## *County Society News*

### ALPENA COUNTY

The Alpena Medical Society enjoyed another of their monthly banquets at the Alpena House, Thursday, April 19. Drs. Bell and Small were the hosts to the fifteen members who sat down to dinner at 6 p. m. Dr. H. Spencer of the United States Public Health Service was a guest of the society, and gave an interesting description of the work of his department.

All the members of the Society under the age of 55 have signified their willingness to serve on the Medical Reserve force. They were urged to complete their application, and get in a position where the government could use them on short notice.

Dr. Leo Secrist read an interesting paper on the value of climate in the treatment of tuberculosis.

Dr. John Purdy described the work of the Tuberculosis Survey of the State Board of Health, with which he had spent several weeks.

Drs. Schmalder and Bertram were assigned papers

for the next meeting. Drs. McKnight and W. A. Secrist to entertain.

The regular monthly meeting of the Alpena Medical Society was held at the Alpena House, Thursday, May 17 at 6 p. m. Drs. E. E. McKnight and W. A. Secrist were the hosts at dinner. Those present were: Fred Nevis, Posen; Wm. Arscott, Rogers City; John Purdy, Long Rapids; A. R. Miller, Harrisville; A. J. Schmalder and George Lister, Hillman; and from Alpena, J. D. Dunlop, D. A. Cameron, E. E. McKnight, W. A. Secrist, James Small, Otto Bertram, F. J. McDaniels, Leo Secrist and C. M. Williams.

The program of the evening consisted of a paper on the Treatment of Syphilis by R. J. Schmalder of Hillman and one on the Business Side by Otto Bertram of Alpena.

Both papers called out vigorous discussions. Case reports were also presented by Wm. Arscott, A. R. Miller, and Fred Nevis.

Drs. Miller and Small were appointed to present scientific papers at the next meeting, June 21. Dr. Lister and Bertram were appointed to entertain.

C. M. WILLIAMS, Secretary.

### BRANCH COUNTY

The regular quarterly meeting of the Branch County Medical Society was held at Library Hall, Coldwater, Tuesday, April 17, 1917. The following business was transacted:

Moved and carried, that the annual picnic be held at Morrison Lake, at the time of the next regular meeting, Tuesday, July 17th. Dr. Samuel Schultz offered the use of his spacious cottage for the occasion, and the offer was unanimously accepted.

Upon motion, a committee was appointed, consisting of Drs. F. W. Stewart, W. A. Griffith and W. H. Baldwin, to revise the schedule of fees to meet the existing cost of living, and present the same to all physicians for signature.

Communication from President and Secretary of the State Society, relative to special meeting to be held at Battle Creek, May 10th, presented, and regular delegates instructed to attend.

The following excellent papers were presented: "The Doctor and the High Cost of Living," Dr. F. W. Stewart; "Genito Urinary Surgery," Dr. D. H. Wood; "Diphtheria Anti-toxin," Dr. N. Baldwin.

W. H. BALDWIN, Secretary.

### BERRIEN COUNTY

At the last regular meeting held May 17, the Society unanimously voted in favor of any action the State Society should see fit to take toward the relief of the dependents of members of the State Society who enter the military service.

Dr. C. V. Spawr (now Lieut. S. G. U. S. Naval Reserve on duty on U. S. S. Baron de Kalb) was elected a member of the Society.

W. P. MORRILL, Secretary.

### GRATIOT-ISABELLA-CLARE COUNTY

The Gratiot-Isabella-Clare County met as per the enclosed program. Sixteen members and two visitors were present. Dr. J. N. Day, Jr. of Alma was elected to membership; Dr. C. D. Pullen of Mt. Pleasant was elected delegate to the State Society meeting and C. B. Gardner of Alma Alternate. Dr. C. F. Pankhurst of North Star was appointed to act for Gratiot, Dr. C. D. Pullen of Mt. Pleasant for Isabella, and Dr. J. A. Reeder for Clare in the prosecution of a quack by the name of A. Bernard. So much time was taken up in the discussion of the latter case and medical preparedness that Dr. J. A. Reeder's paper on Rural Surgery was put over until the next meeting.

#### PROGRAM.

Call to order by President.

Application for Membership.

Clinic—The Diagnosis of Hodgkins Disease with Exhibition of Slides, by Dr. M. F. Bronstetter; Medical Preparedness, by Dr. C. D. Pullen; Rural Surgery, by Dr. J. A. Reeder.

Election of delegates and alternates to State Society Meeting.

Unfinished business.

Payment of dues.

E. M. HIGHFIELD, Secretary.

### HOUGHTON COUNTY

The May meeting was held at the Houghton Club, Houghton, Mich., and was a joint meeting of the Medical and Dental Societies of Houghton County. The program was as follows:

Dental Radiographs,

Dr. W. T. S. Gregg.

Treatment of Root Canals,

Dr. E. J. Chaput.

The Relation of Tooth Infection to the General Health,

Dr. D. D. Todd.

Discussion of Medical Preparedness.

There were fifty in attendance and everyone attested to the excellence of the program.

J. H. HOLMES, Secretary.

### KALAMAZOO ACADEMY OF MEDICINE

The Kalamazoo Academy of Medicine convened for its regular meetings on April 24, 1917 and on May 8, 1917 with the President, C. B. Fulkerson, in the chair. The minutes of the previous meetings

were approved as read. On April 24, 1917 the Academy enjoyed the following program.

1. The Relation of Intestinal Conditions to Constitutional States and the Methods of Treatment. Lantern Slide Demonstration

Dr. Charles A. L. Reed, Cincinnati, Ohio,  
Professor of Gynecology.

General discussion.

2. "Sex" Its Cause and Its Consequence in Inheritance. Lantern Slide Demonstration.

LeRoy H. Harvey, Ph.D., Kalamazoo.  
Western State Normal.

General discussion.

On May 8, 1917, Dr. Frederick Novy of the University was the guest of the Academy and the program for the day was as follows:

1. Anaphylaxis.

Dr. Frederick Novy, Professor of Bacteriology,  
University of Michigan.

Discussion opened by W. A. Perkins and F. C. Penoyer.

2. The Bacteriological Studies of the Extirpated Tonsils in 234 Tonsillectomies.

W. A. Perkins.

Discussion opened by Dr. F. G. Novy.

Brief abstracts of previous papers follow:

#### DISORDERS OF THE ESOPHAGUS.

By Dr. J. B. Jackson, Kalamazoo.

For the purpose of this report the following classification of esophageal disorders has been made:

1. Intrinsic disease of the esophagus.

(A) Organic.

(a) A congenital atresia.

(b) Diverticulum.

(c) Neoplasm.

(d) Stricture.

(B) Functional disease of the esophagus.

(a) Cardiospasm.

2. Disease processes outside of the esophagus.

(A) Aortic aneurysm.

(B) Neoplasms adjacent to the esophagus.

Congenital atresia to be distinguished from congenital stricture without complete closure. The lower end of the esophagus usually communicates with the trachea. Diverticula are two kinds: the pulsion diverticulum of Zenker and the traction diverticulum. Zenker's diverticulum is amenable to surgical treatment. Of the neoplasms, carcinoma is the most frequent. These are characterized by rapid progress and tendency to ulcerate. Sarcoma and diffuse fibro-myoma have been reported. Strictures are either congenital or traumatic. They are usually due to corrosive poisons.

Cardiospasm has been best described by Plummer, who reports a large number of cases. He describes three stages: (1) Cardiospasm without food re-



gurgitation; (2) Cardiospasm with immediate food regurgitation; (3) Cardiospasm with dilated esophagus and retention of food for varying intervals of time. The etiology is obscure. The possible relation of cardiospasm and spondylitis has been suggested by Dr. A. W. Crane.

Dysphagia due to aneurysm and mediastinal tumors is ordinarily readily differentiated from intrinsic disease of the esophagus on account of the presence of other important symptoms.

Methods of diagnosing these cases include X-ray, esophagoscope, the threaded olive bougie and the stomach tube.

#### CASE REPORTS.

Case 1. Congenital atresia.

Case 2. Zenker's diverticulum.

Cases 3, 4, 5. Cancer of the esophagus.

Case 6. Cancer of the cardiac end of the stomach.

Case 7. Cardiospasm with dilatation of the esophagus.

Case 8. Cardiospasm.

Case 9. Cardiospasm with dilatation of the esophagus.

Cases 10, 11. Foreign bodies in the esophagus.

Case 12. Neoplasm of the trachea making pressure on the esophagus.

#### THE PSYCHOLOGY OF ALCOHOLIC INTOXICATION.

By Dr. R. A. Morter, Kalamazoo.

In the past too much stress has been laid on accumulating statistics as to the manufacture and consumption of alcoholic beverages. Too much stress has been laid on the effect of alcohol in causing insanity, also in causing weakness and disease in offsprings. The individual psychology of the inebriate has not been studied. We have not asked ourselves "Why does this man crave alcoholics?"

The use of alcoholics is deeply rooted in primitive people and alcoholic intoxication has played an important part in the history of mankind. Religious leaders have become intoxicated in order to induce a mental state in which they could see visions, make prophecies and profess to drive out evil influences and disease. It has been used at marriages to promote pleasure and excitement. At death and at funerals it has been the custom to become intoxicated in order that there might be artificial excitement and weeping. The primitive races and tribes used it in a social way to assist in the amalgamation of the tribes and to foster co-ordination within its groups.

Physiologically alcohol in small doses shortens the reaction time and increasingly so with an increase of the dosage up to a certain limit. After the limit is reached it depresses all activities. Alcohol when taken into the stomach in strong solutions reflexly, by its irritant action, increases the heart

action and raises blood pressure. Alcohol today is not considered to stimulate any portion of the cardiovascular system. Indeed, there is much evidence that it does just the contrary.

The effect of alcohol upon the psychic differs greatly in different individuals. In general it may be said that alcohol excites nervous tissue. It stimulates inhibition; it excites the personal, the intimate self, takes off the temper, so to speak, and brings out in a man that which he essentially is. He takes an optimistic view of life, tells interesting details which he had held back as trivial and uninteresting.

Normal and abnormal individuals drink alcohol, but the extent of their imbibing differs greatly. The normal man uses alcoholics in order to make himself fit into society and to be congenial. In his efforts to adjust himself to his environment he would take a drink in a social way if it were the custom, but would not become intoxicated. The abnormal individual is a type of organism that favors the acquisition of the habit of excessive or morbid use of alcohol. This type may be divided into two classes—the undeveloped, and the degenerate.

The first class, the undeveloped or mentally defective, are all suggestible, irresponsible individuals who do not realize the value of inhibition. To this class belong the simple inebriates. About 65 per cent. of these are lacking in mental development and may be classified as Morons.

The second class, the degenerate, oversensitive, or otherwise morbid, nervous organization commonly possess qualities which go with culture and high ideals, but they lack balance. This class is subject to mental conflicts and drink because of definite returns which they get from drinking.

In Charles Lamb's essay, "The Confession of a Drunkard," he tells of his own hereditary taint and describes his conflicts and mental depressions and states that he sought the effect of intoxication to escape these. Edgar Allen Poe's writings also show that he sought alcoholics for the same purpose. Others drink alcoholics in order to take off inhibition and thus relieve them of bashfulness or shyness. Of those admitted to the Michigan state hospitals during one year 62 per cent. used alcoholics and in the majority of these the alcoholic excesses were the expression of a psychosis. Cases which were formerly diagnosed as alcoholic insanity have turned out to be manic depressive and dementia praecox. Alcoholism is not always a symptom, but we should analyze our cases more thoroughly. We should ask ourselves "why" and not be too quick to call a mental disease an alcoholic psychosis just because we have a history of alcoholic excess. It is not the alcohol itself but the motives for its excessive use that must be attacked.

## SHIAWASSEE COUNTY

A special meeting of this society was held in Owosso on May 15th at which Dr. H. S. Hatch, of the State Tuberculosis Survey staff read an instructive paper on "The Early Diagnosis of Tuberculosis." Dr. Wm. DeKleine, Director, and Dr. E. R. Vander Slice, another staff member were present, and a fair attendance of members. The paper and discussion was of much benefit to all, and every doctor present carried away some new ideas on an old subject. The tubercular survey in Shiawassee county was a very great help to both laity and the medical profession.

W. E. WARD, Secretary.

## Book Reviews

TRAUMATIC SURGERY by John J. Moorhead, M.D., F.A.C.S. Adjunct Professor of Surgery in the New York Post-Graduate School and Hospital. Octave volume of 760 pages with 522 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.50 net. Half Morocco, \$8.00 net.

This work is an excellent presentation of the surgery of traumatic conditions. In fact it is the most complete and satisfactory presentation of the subject. Would that every physician who is called upon to treat industrial injuries might have the benefit of the principles and treatment outlined. There would then follow a higher grade of industrial surgery and less permanent results due to bungling treatment.

The chapter on fractures is excellent but would be improved with a little more attention to treatment. The text on traumatic neurosis is an able discussion of this important feature of accidental injuries. The chapter on medicolegal phases is enlightening on the whole and directs attention to the care that should be exercised when attending compensation cases. The work should and will meet with a cordial reception.

THE SURGICAL CLINICS OF CHICAGO, Volume I, No. 2, April, 1917, with 99 illustrations. Published bi-monthly. W. B. Saunders & Co., Philadelphia.

This issue of the new series is of considerable interest and merit. We are inclined to the opinion that eventually the series will be equal in value to the famed Murphy Clinics.

## Miscellany

### STATE COMMITTEE OF NATIONAL DEFENSE—MICHIGAN.

\*Peterson, Reuben, Chairman, 620 Forest Ave., Ann Arbor.

Biddle, A. P., President, State Med. Soc., David Whitney Bldg., Detroit.

Warnshuis, F. C., Secretary, State Med. Soc., Powers' Theatre Bldg., Grand Rapids.

President-elect, State Med. Society.

Secretary-elect, State Med. Society.

Ballin, Max, 355 Woodward Ave., Detroit.

Burkhart, John L., Sec., State Board of Health, Lansing.

\*Case, J. T., Battle Creek Sanitarium, Battle Creek.

\*Hafford, Dr., Albion.

\*Haughey, Wm. H., Battle Creek, 24 W. Main St.

\*Hornbogen, A. W., Savings Bk. Bldg., Marquette.

Jennings, Dr., 435 Jefferson Ave., E. Detroit.

\*Nancrede, C. B. G., Cutting Apartments, Ann Arbor.

Manwaring, J. G. R., Dryden Bldg., Flint.

McClure, Roy, Detroit.

\*McLean, Angus, David Whitney Bldg., Detroit.

Parker, Walter R., 1025 Whitney Bldg., Detroit.

Smith, Eugene, 32 Adams Ave., W., Detroit.

\*Smith, Richard R., Metz Bldg., Grand Rapids.

\*Vaughan, Victor C., 221 State St., Ann Arbor.

\*Wile, Udo, University Hospital, Ann Arbor.

\*Examiners.

### ADVANTAGES OF GERMICIDAL SOAP.

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Germicidal Soap does not attack nicked or steel instruments, as does bichloride of mercury. It will not cause numbing of the hands as does carbolic acid.

Germicidal Soap is supplied in two strengths: Germicidal Soap, two per cent. mercuric iodide—large cakes, one in a carton; Germicidal Soap, Mild, one per cent. mercuric iodide—large cakes, one in a carton—small cakes, five in a carton; Germicidal Soap, Soft, one per cent., in collapsible tubes; and Germicidal Soap Surgical, one per cent., in cylindrical cakes wrapped in perforated paper and enclosed in a nickel-plated case. It is well to specify "P. D. & Co." in ordering.

*Sterling Violet Ray Generator.*—This is a small frequency apparatus with some vacuum and possibly other electrodes. The apparatus is not one for producing violet or ultra-violet rays in the scientific meaning of those words. The apparatus will not do the things claimed for it in the advertising booklet which includes the treatment of practically every ailment known to mankind (*Jour. A.M.A.*, April 14, 1917, p. 1141).



# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVI

GRAND RAPIDS, MICHIGAN, JULY, 1917

No. 7

### *Original Articles*

#### ABDOMINAL INJURIES—SYMPTOMS, TREATMENT, CASE REPORTS.

LEO JOHN DRETZKA, M.D.

DETROIT, MICH.

Owing to the rapid increase in the population of our city, its attendant traffic congestion, over-crowded tenderloin districts, and other accident-provoking conditions existing in thriving cities, the past two years have given us a great variety and number of abdominal injury cases. Out of some two hundred and sixty such cases, I have drawn the conclusions which I am giving below. And in passing, I would say that too much attention cannot be given to the making of a diagnosis in cases of injury to the abdomen.

Injuries to the abdomen may be classified as extra and intra-abdominal wounds. Conditions generally encountered in the former are contusions and lacerations of various degrees. Ruptures of the muscles are rare.

The cardinal symptoms of extra and non-perforated abdominal wounds are often so closely allied that great precaution must be taken in drawing conclusions.

The symptoms of contusions are abdominal rigidity, labored respiration, pulse rapid but of good quality, pain not localized but general; and in the more severe forms there may be vomiting of the stomach contents, free from blood. Patient is conscious, and does not suffer from general systemic shock.

#### TREATMENT.

Close observation for twenty-four hours to note any change in the pulse rate, decrease in temperature, or persistent or localized pain; excreta and vomitus examined carefully to detect any evidence of blood; hematomas and swellings usually disappear under pressure—an ice bag may be applied. In the event of an

abscess forming, it is treated in the usual manner.

*Treatment of Lacerations.*—The surrounding skin area thoroughly cleansed; foreign bodies carefully looked for and removed; a weak solution of iodine poured into the wound; bleeding points controlled; the wound sutured with drainage, if necessary.

Intra-abdominal wounds are divided into two classes, viz: penetrating and non-penetrating.

The symptoms attending both these divisions are practically similar. Of course, the former, with its wound of entrance, makes diagnosis less difficult. Systematic shock is invariably present, with marked rigidity of the abdominal muscles; hemorrhage is indicated by an increase in rate and volume of the pulse, by pallor, by low blood pressure and decrease in temperature, which is often sub-normal; blood in the vomitus, urine or stool; pain is a valuable sign, especially when localized; dullness in the flanks is usually indicative of blood or intestinal contents. In making diagnosis, it is well to catheterize the patient, and also to administer a simple enema for the detection of blood.

Perforated wounds are caused, as a general rule, by bullet perforation or stabs; in the latter case there may be an escape of blood or excreta, or protrusion of the bowel. In a contusion or slight wound of the abdomen, there may be extensive visceral involvement.

In this connection, I recall the case of a patient who had been shot in the abdomen. He was placed under arrest without disclosing the fact of his injury, and after having spent twelve hours in jail, was discharged; an hour after reaching his home, he fell to the floor exhausted and was removed to the hospital. We operated immediately and found his abdominal cavity filled with blood, and twelve perforations of the bowel. He died two hours later.

I cite this case merely to show that, unless an extremely careful and thorough examination is made, internal hemorrhage and perforations

may be present for many hours without manifesting any objective symptoms.

*Treatment.*—It is imperative that the attention should be first directed to combating shock; inasmuch as we usually find the pulse rate in these cases very weak, often imperceptible, it is necessary to bring about a change in its volume. The value of intravenous injections of normal saline solution at this time cannot be over-estimated, the amount varying with the pulse reaction; cardiac stimulants are also of value; plenty of heat in the form of hot water bottles and warm blankets. During the time this preliminary treatment is being administered, the patient's abdomen is being surgically prepared, and as soon as his condition will permit, the operator begins.

In a stab wound, the intra-abdominal pressure very often forces out much bowel through a small opening; in these cases the bowel frequently becomes strangulated—heat should be applied immediately to the bowel and the strangulation released.

The entire cavity may be filled with blood clots. The control of the hemorrhage now occupies the surgeon's attention. The vessels of the mesentery and omentum are often severed; with the free bleeding controlled and the rents in the omentum closed, the perforations of the viscera are now systematically looked for and closed. If the laceration is extensive, or perforations grouped, as is often the case in bullet wounds, a resection of that portion is indicated. If the condition of the patient will not warrant this extensive procedure, the loop of bowel may be brought through the wound at the time of closure and a rectal-fistula will result, which may be cared for at a later stage. Ample drainage is now inserted, and the wound is closed in the regular manner. Post-operative treatment consists in stimulation; hypodermoclysis when necessary; elevation of the foot of the bed, with plenty of heat to the body.

Stomach holes can be closed with purse strings or infolding sutures. There is danger of stenosis if the perforation is near the cardia or pylorus, which necessitates a gastro-enterostomy. Perforations may involve one or both walls: the posterior wall is most conveniently reached and sutured through the anterior opening.

*Liver Lacerations.*—This condition often gives rise to troublesome hemorrhage; a wide mattress suture usually controls this, but I have derived the best results from the gauze pack.

The spleen, pancreas and bladder should be considered in this classification. I have, how-

ever, had little experience with these organs in the cases from which I have drawn my conclusions.

#### CASE REPORTS.

CASE 1. J. C. Male. Age 24 years. Admitted January 25, 1916. Stab wound of the abdomen, with much bowel protruding and partly strangulated. In a severe state of shock. Pulse 150; temperature 97; respiration shallow.

*Treatment.*—600 CC. Normal Saline solution. Heat applied to exposed bowel; stricture released; deep epigastric artery severed and controlled; two perforations of the bowel repaired; bleeding points in omentum controlled; drains inserted.

Patient now employed at Ford Motor Car Company.

CASE 2. E. D. Female. Age 33 years. Admitted June 3, 1916. Gun shot wounds in chest and abdomen. Two bullets entered the left lung and the third abdominal wall. Patient showed no symptoms of perforation, so was put to bed immediately. X-ray examination disclosed that the bullet which entered the abdominal wall was lodged just below the crest of the ileum, and was causing no trouble.

Patient was discharged in twelve days.

CASE 3. S. M. Male. Colored. Age 28 years. Admitted March 18, 1917. Shot in abdomen. In severe condition of shock; firm rigidity of abdomen. Pulse imperceptible; temperature 97.40; respiration shallow; single wound of entrance; laparotomy disclosed cavity filled with blood and intestinal contents; twenty-two perforations of the bowels and a four inch laceration. Perforations were repaired and eight inches of bowel resected. Closure with drainage.

Patient died two days later.

CASE 4. J. Mc. Male. Age 35 years. Admitted October 7, 1916. Shot through abdomen, bullet entering lumbar region with exit above umbilicus. Patient conscious; pulse 110; temperature 98; respiration labored and shallow. Laparotomy disclosed perforation of stomach at pylorus, and three perforations of the bowel. These were repaired in the usual manner, and a gastro-enterostomy performed.

Patient improved for several days, then developed pneumonia and dies three weeks later.

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#### THE CORRECT INTERPRETATION OF BLADDER SYMPTOMS IN THE FEMALE.

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BIG RAPIDS, MICH.

Bladder symptoms in the female occur under the same conditions of bladder and kidney disease as in the male and in addition often present themselves when the disease is in the female sexual organs and when the bladder itself is unaffected. A patient complains of frequent micturition, burning pain and tenesmus immediately following micturition, etc. It is evident that these are the symptoms of cystitis



and the problem presented to the physician is to discover the cause of the symptoms. The cause may be any of the following conditions:

Infection of any portion of the urinary tract; disease or displacement of the uterus or its appendages; irritable caruncle of the urethra; new growths in the bladder; stone in the bladder, and the symptoms are often simulated in hysteria and diabetes. The first procedure after obtaining the history in such a case is to secure a specimen of urine with the catheter and subject it to a microscopical examination. The presence of pus denotes urinary infection, its absence at least demonstrates that cystitis is not present. Error sometimes occurs from dependence upon a voided specimen of urine as that is frequently contaminated by vaginal discharges.

The urine being found free of pus the presumption then is that the bladder symptoms are caused by disease in the pelvic organs and a physical examination will reveal whether this is true or not and at the same time suggest the appropriate treatment. Very distressing bladder symptoms often occur from the presence of endometritis, uterine displacements, uterine tumors, ovarian tumors, etc. Inspection will also determine the presence or absence of an irritable caruncle. Occasionally distressing bladder symptoms, severe tenesmus and frequent micturition occur without pus in the urine and without any evidence of pelvic disease. In these cases the urine is intensely acid and it should be suspected that there is an infection of the pelvis of one kidney, with blocking either temporary or permanent of the ureter. I had a patient several years ago in which these symptoms had persisted most of the time for seven years, during which period various physicians had performed all sort of operations upon her pelvic organs without in the least improving her condition. At times she had pus in the urine, but most of the time there was no trace of it. She was eventually found to have tuberculosis of the right kidney, the left being normal, and complete recovery followed removal of the diseased organ. If the urine is found loaded with pus appearing in masses with an alkaline reaction it may reasonably be inferred that the trouble is cystitis without kidney complications. Many cases appear in which the symptoms and appearance of pus are intermittent, in which event it is reasonable to suspect infection in one kidney alone. The infective agent should be determined by culture of the catheterized urine and many cases can be cured by appropriate local treatment and the use of autogenous vaccines. Only the pus pro-

ducing germs can be discovered in this way and as these organisms also occur in most cases of tuberculosis of the urinary tract it often is very difficult to recognize the presence of the tubercle bacilli. It is advisable when this organism is suspected, to have a specimen centrifuged daily for a week or more and the pus stained for the. Failure to find these, however, does not absolutely settle the question. A case proving obstinate to ordinary treatment requires further investigation and this is made with the cystoscope and ureteral catheter. Much can be learned by an experienced investigator with the cystoscope alone. The bladder should first be thoroughly irrigated and a local anesthetic instilled. Rarely with nervous patients or very irritable bladders a general anesthetic will be required.

The administration of Methylene blue for twelve hours before the examination will be found a valuable procedure. The bladder having been thoroughly irrigated it is comfortably filled with clear water and the optical attachment introduced. With the modern instruments the bladder wall can be thoroughly inspected and its condition determined with certainty. If papilloma or other growths are present they may be easily recognized. The mouths of the ureters can usually be easily located, especially if urine is coming down from both kidneys and Methylene blue has been administered for the mucous membrane around the opening will be found stained, also the blue urine may easily be seen emerging intermittently from the ureteral orifice. The beginner must not too readily assume, however, that one kidney is not functioning because he does not see the fluid escaping during his period of observation. As one of my cases illustrates, it sometimes requires considerable time before the flow appears through a ureteral catheter even when the kidney is in fairly good condition. Inspection of the bladder having been completed the next procedure, in appropriate cases, is to introduce the ureteral catheters. The patient's symptoms, or the appearance of the ureteral orifice may have suggested that the disease exists in a particular kidney, but it is quite important that the urine be obtained from each kidney for in many cases when operation is indicated it is of the utmost importance to determine whether or not one kidney is sound.

The catheters having been introduced the cystoscope may be removed and the urine allowed to drop in sterile glasses, the catheters being marked to denote the respective kidneys they are draining. The separate urines should then

be examined microscopically and bacteriologically and the exact condition demonstrated.

While this paper does not deal with treatment I cannot resist saying that irrigation of the pelvis of the kidney while the catheter is in place is a very valuable therapeutic procedure in all cases of pyelitis due to ordinary pus producing organisms.

The procedures thus outlined—urinary examination, physical examination, cystoscopy, ureteral catheterization with microscopical and bacteriological studies of the excreted fluid, can be depended upon in practically all cases to furnish scientific interpretation of all bladder symptoms.

The following cases histories illustrate particularly the advantage of the ureteral catheter:

CASE 1. Mrs. G. aged 68, complained of the usual symptoms of cystitis. She stated that she had been afflicted with these symptoms at intervals for many years, had been treated with bladder irrigations, diuretics, and vaccines without permanent relief. I found that she had acid urine, a small amount of pus, no casts nor albumin. She entered the hospital and remained in bed for a few days. Bladder irrigations were used which reduced the irritability, culture of urine revealed the colon bacillus present. She was given vaccines and urotropin. Improvement took place rapidly and the pus disappeared. I was about to permit the patient to leave her bed when the pus reappeared suddenly in considerable amount with albumin. This admitted of but one explanation. One of the ureters had been blocked. I administered Methylene blue in the evening and the following morning introduced the cystoscope. Blue urine was readily seen passing from the left ureter. Catheter was passed and the urine found to be normal. The mouth of the right ureter was discovered with more difficulty and no urine was seen passing from it. A catheter was passed without difficulty and the cystoscope was withdrawn. No urine appearing sterile water was carefully injected through the catheter in small amounts. There was no return for a considerable time and after an hour and a half I was on the point of withdrawing the catheter and pronouncing the kidney functionless and recommending its removal when suddenly a blue fluid appeared and in a very few minutes an ounce was obtained. I then irrigated the kidney with a solution of alphozone and removed the catheter. The urine was found to contain much pus. A repetition of the kidney pelvis irrigations several times cleared up the pus completely. This was undoubtedly a case in which the clumps of pus blocked up the small catheter for a time.

CASE 2. Mrs. T., aged 40, had suffered for many years with recurring attacks of pain in the right side followed by painful and frequent urination. She had been treated by many excellent physicians and been examined at one of the great clinics of the country. I found that the cystoscope had never been used and that her urine contained pus. So after administration of Methylene blue I made the examination. The catheter passed readily up the

left ureter and revealed normal urine. It passed as readily for two inches up the right and I could at that time pass it no further. I obtained smaller catheters and at subsequent attempts passed the stricture, also another one five inches from the ureteral orifice. The urine obtained was blue and contained pus cells. The treatment was repeated several times, the urine became clear and for five months there has been no return of her attacks of pain.

All of the usual conditions causing bladder symptoms have now been referred to except calculi in the ureter and the kidney pelvis. Positive diagnosis of this condition is oftentimes difficult because the symptoms produced are the same as those caused from blocking of the ureter from stricture or clumps of pus. The ureteral catheter or wax tipped bougie may render the diagnosis positive. This method being applicable in females by Kelly's method of catheterization, but in many cases exhaustive X-ray studies will be required while a catheter is *in situ* that is impermeable to the X-ray. It is not sufficient to use the X-ray without the catheter for it frequently happens that shadows appear near the ureters, but not in them, which without the presence of the catheter would be mistaken for ureteral stones.

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#### CONTRIBUTIONS TO MEDICAL LITERATURE BY THE PROFESSION OF DETROIT DURING THE LAST SIXTEEN YEARS—(1900-1915 BOTH INCLUSIVE.)\*

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At the last session of the Congress of Physicians and Surgeons, which meets every three years in Washington, I had occasion to mention the name of one of our well-known colleagues. The question came back, "Who is he?" "What has he written?" "Never heard of him." In attempting to answer these questions, the thought occurred to me, "What has he written, in short, what has any of us, all of us, written, what have been our contributions to medical literature during the last two decades?" Perhaps it is not so surprising that we are not better known away from home, because we have paid too little attention to the literary side of our profession. At any rate, an investigation of our medical contributions to the literature could do no harm, and might lead to some interesting and important discoveries.

The method of attack was to obtain authentic lists of the medical profession of Detroit each year for a certain number of years back and then search the records for their contributions. This was done by using Polk's Medical

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Directory, the A. M. A. Medical Directory, as far back as published, and then searching the Index Medicus and the French substitute *Bibliographia medica* for the medical articles, indexed under the name. A start was made with the year 1900, for convenience sake, as the Index Medicus, old series, suspended publication in April, 1899 and for nearly a year there was no substitute. In 1900 the French publication, *Bibliographia Medica*, started but only lasted three years or until the present Index Medicus was started. So that it will be seen that this investigation extends from January 1, 1900 to January 1, 1916. The year 1916 was not reviewed because this work was started late last summer and it was not considered practical to review a part of a year. Turning to the list of Detroit physicians in Polk's Medical Directory for 1900, each name was checked off in the list of authors in *Bibliographia Medica* for 1900. When one was found in the latter that corresponded to one in the former, the reference page was noted and looked up. Then the title of the article, the journal, the year, the volume and the page were placed opposite the name. The name of every Detroit physician appearing in Polk's for 1900 was checked in the same way in the medical index for 1900. Then the year 1901 was taken and so on down to and including the year 1915. As was mentioned, wherever possible, the A.M.A. Medical Directory was used especially for the later years.

When the lists for the different years were all prepared, checked off and revised, the articles in the various journals were all read, certain points in the article were noted, for example, did the writer have any bibliography at the end of the article, did he report any cases, or did he simply write generalities, or did he rehash some textbook or textbooks? What was his article, good, fair or poor?

While the number of articles reviewed was nearly 1200, the number written during these sixteen years was over 1300. A few articles, about one hundred, were published, or perhaps buried is a better word, in such insignificant journals that they were not available for perusal either in our own library or in the medical stacks of the library at Ann Arbor.

A perusal of the data gained disclosed some interesting figures. Of the 1189 articles reviewed, in only 155 or 13 per cent. of all, did the authors show that the medical literature had been consulted. In 1034 articles, or 87 per cent. of all, the writers neither referred to the medical literature in the body of the article nor did they append any bibliography. Con-

cerning the quality of the article as an addition to medical literature, I have classified them as good, fair and poor. This was purely arbitrary on my part and many articles classified as fair might be considered as poor by another. This is agreed, but I do not believe we would vary much as to the number of articles classified as good. The figures were as follows. Of the 1189 articles 85, or 7 per cent., were good; 911, or 77 per cent., were classified as fair and 193, or 16 per cent., were poor. Certainly a very poor showing for sixteen years! The number of articles written each year varied from twenty-one papers in 1902, to 135 articles written in 1906. I will not weary you with the figures for each year but refer you to the appended tables.

Another angle, from which all these yearly lists were considered, was that of place of publication. The 1189 articles reviewed plus the number that could not be located or 196 equals 1387 articles, the total number written by members of the Detroit profession during the sixteen years reviewed. These 1387 articles were published in 1448 journals or sixty-one of them were published in one or more journals. This duplication will be referred to later on. Of these 1387 places of publication, 332, or 24 per cent., were in journals published in Detroit; 553, or 39 per cent., in journals published in this state or in other state journals; 487, or 35 per cent., in national medical journals and 33, or 2 per cent., in foreign journals. This latter division includes the articles published in Canadian medical journals.

The statistics just given show that our contributions to medical literature during the last sixteen years have lacked both in quality and in quantity. It is not surprising that a good many of us are not known, if not beyond the limits of our city, at least beyond the borders of our state. This will continue to be so until we are awake and do more than we have in the past. We must not think that when we are invited to read a paper before our own or some other county society and we sit down the night before and dash off several pages of platitudes, generalities or rehash several text books upon a chosen subject, we must not think, that we have done our duty to ourselves and our profession and furnished our share of contributions to the medical literature. Not that I would discourage reading papers before county societies or small gatherings of special societies, but do not let your energies rest there. Every medical man should produce every year at least two first class medical papers or monographs

that are worth while. This may seem to be a hardship to a busy medical practitioner who will say that he has no time for experimental or research work. This is no doubt true, but the busy practitioner, and by this term I include the specialists, could confine his energies to reporting some unusual case, some untoward symptom or some special operation that must be found among his daily cases either in the hospital or in the home. Too often when a suitable basis for a paper does result, the writer is liable to rush into print, as it were, without giving the subject matter the proper careful consideration that he does his other medical work.

In the first place, let us say that you have a proper topic for discussion, for example, a small transverse incision in operating for appendicitis. You have tried this method of opening the abdomen when operating for appendicitis and find that in your hand it facilitates the technic. Do not rush into print immediately after first operation as so many do, thinking to be the first to describe such a wonderful modification of the operative technic. Wait until you have one hundred operations or better two hundred or more. In the meantime you will be able to scan the literature by looking the subject up in the *Index Medicus*, the *Catalogue of the Surgeon-General's Library*, or in the *Cumulative Index of the A.M.A.* You may find that some one else has already tried this same thing years before and abandoned it after a few hundred operations. With all your operations, with all the data gleaned from the medical literature upon abdominal incisions in general, because we will infer you will probably not find your special incision, with the histories of your patients, description of the operation, after care and convalescence, you may now start your paper. If you use proper discretion in the handling of all this material, it will take but a few hours to write your article. I am not trying to advise how to write the paper because I am taking it for granted that the real composition of the essay is known to you. I simply want to advise you how to choose your data so that we may all correct our mistakes and short comings of the past.

Among the papers received, I found one that had a very comprehensive title about a new method of treating typhoid fever, with report of 138 consecutive cases successfully treated during the last ten years. This article was composed of three and one-half pages, one full page of which was taken up with a temperature and respiration chart. You can easily imagine

how fully the subject was treated. Such papers are utterly worthless and might better not have been written. But what a fine subject and what fine material with 138 cases to produce an epoch making monograph. I found so many like this in my search in the literature of the last sixteen years. Another instance was a paper on a new operation for amputation of the cervix. The reporter had done one or at most two of this new operation. Yet he reports it as a very successful operation and drew his conclusions from but one or two operations.

Let us suppose that some one of you has an unusual case to report. By all means do so and try to have your own notes as full as it is possible to make them, a complete history of the patient, supplemented with laboratory findings and in fatal cases with pathological diagnosis both macro and microscopical. The next step is to search the literature carefully for all similar cases and suppose for example you find fifty other cases in the literature. These fifty cases should be reviewed in a general way by you in your paper. The addition of your case makes 51 in the literature and brings the literature of this subject down to date. When the next case of this kind occurs the next reporter will be obliged to make use of your exhaustive article and mention you in connection with his report. Of course all of this takes time and a lot of hard work, but a lot of the data can be turned over to your office assistant who can easily be taught how to look up medical literature and employ her spare moments by this diversion.

Another instance of weakness on our part is in the choice of journal in which to publish our paper. You will remember the figures I read above, nearly two-thirds of the papers written during the last sixteen years have been published in local medical journals. This is of course no way to obtain a wide circle of readers or at least a circle of readers of the best class. If you must publish your article in a local journal, then a good plan is to make an abstract of your article, referring to the journal, year, volume and page and send this abstract to twenty or thirty of the leading national journals with a request that it be published in their abstract department when a chance offers. This abstract need only consist of a few words but it will call attention to your original article in a way that nothing else will. This method of dissemination may also be used wherever your article is published. It is a casting of your literary bread upon the medical waters.



Another reason for having a list of good contributions to the medical literature is that some of you will no doubt be ambitious of joining your special national society. Unless you can furnish a fairly comprehensive bibliography of personal articles, your chance of being asked to join these societies will be slim. In looking over the transactions of the last Congress of Physicians and Surgeons, I consulted the membership lists and found that by actual count only twenty-two members were from Detroit. Deducting names counted twice leaves only twenty men from Detroit that belong to the various special societies that compose the congress. The American Neurological Association, the Association of American Physicians, the American Association of Genito-Urinary Surgeons and the American Society of Tropical Medicine, have no members that hail from Detroit.

In closing I would like to append verbatim an abstract that I read in the *Journal of the American Medical Association* a few weeks ago. (Vid. *Journal A.M.A.*, 1917, LXVIII, 395). This abstract is made of an article, entitled, "Too Many Medical Papers," that appeared in an Italian medical journal, *Il Policlinico*. The advice and council contained in it is most timely and dilates on many important points that I did not.

The scarcity of paper and its increased cost seem to be universal. The *Policlinico of Rome*, in commenting on the fact that many medical journals have suspended and that others have reduced in size, regards the condition as not an unmixed evil. "The most tangible result," it says, "is that the amount of material published is sensibly reduced. This is not a serious evil, as too much has been and is being published. It is not a bad thing for literary production to be restrained, condensed, reducing particulars to inclusive wholes. It is certain that a larger proportion of the medical journals contain too much that is trite, deplorably banal. They accumulate too many useless data, which might be suppressed to great advantage. Many articles have not the slightest reason for existing, and they merely cumber medical literature. Graphomaniacs, (this is not a bad word; it would not be out of place if applied to some medical men in this country) abound among physicians; some are graphomaniacs from temperament, others from policy." Presumably the *Policlinico* means here that it is an elegant and ethical form of self-advertising. Farther on: "Regardless of the superficiality of certain arguments, they dilate on them and dilute their

	Year	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	Totals	%
Number articles referenced .....		51	60	22	114	108	116	140	86	85	77	104	120	100	95	93	77	1448	—
Number articles written .....		51	60	21	110	101	114	135	85	82	73	98	112	98	86	87	74	1387	100
Place of Publication																			
Detroit Journals .....		37	22	0	34	27	51	38	15	13	19	14	14	12	10	7	16	332	24
State Journals .....		0	12	10	38	45	30	45	50	39	31	42	49	42	28	46	28	535	39
National Journals .....		13	26	10	38	26	32	49	17	29	22	37	45	43	42	30	28	487	35
Foreign Journals .....		1	0	1	0	3	1	3	3	1	1	5	4	1	3	4	2	33	2
Published in two or more Journals.		0	0	1	4	7	2	5	1	3	4	6	8	2	9	6	3	61	4
Number article reviewed .....		45	60	19	101	88	108	116	66	67	60	75	92	83	72	78	59	1189	100
References .....		3	7	4	7	11	9	25	10	5	2	7	10	18	17	15	5	155	13
No references .....		42	53	15	94	77	99	91	56	62	58	68	82	65	55	63	54	1034	87
Good paper .....		0	7	1	5	4	11	11	5	5	8	4	5	5	2	9	3	85	7
Fair paper .....		36	23	10	91	41	69	84	49	61	49	68	83	69	66	66	46	911	77
Poor paper .....		9	30	8	5	43	28	21	12	1	3	3	4	9	4	3	10	193	16

personal observations with a flood of already known facts and opinions. Their writings contain very little that is new, and what is new and interesting is padded out and strung along *ad nauseam*. The same work appears first in some first-class journal and then, under other titles and with slight changes, it appears in minor periodicals and it fills up space and wastes time in medical bibliography. We refrain from further description for fear they might have too personal a tinge. We all know that the incontinence (a good word in the original—it is *incontinenza*) of these authors might be checked and corrected." The *Polio-clinico* then begs writers to spare the editorial staff the waste of time and energy required to pass judgment on the unworthy articles, "not to mention the disagreeable task of rejecting such manuscripts, and the load of responsibility it places on the editorial staff." The writer concludes with this advice, which we respectfully pass on: "Abstain from recording the commonplace and let those who have something really interesting to report suppress useless details, long historical introductions and rehashing of textbooks."

#### DISTURBANCES OF MENOPAUSE AND THEIR RELATION TO BLOOD PRESSURE.

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Women are afflicted with disturbances, caused by either a true menopause or a menopause state which may exist and does exist some times long before menopause period is shown by irregular menses and at times long after menstruation has ceased.

The term menopause does not cover that period in which the sexual life of the individual, whether male or female, has its stormy physical disturbance. The term climacteric, in a sense, covers it pretty well for it is a time when the system undergoes marked changes. This change in a female is not always indicated by a cessation or even a disturbance in the menstruation. Many times we see oversecretions and undersecretions from the ovaries of the female, the testes of the male which cause a marked disturbance of the circulation, of the nervous tone, even of the mental states of the individual.

It is an accepted theory that in the removal of the ovaries, menstruation ceases and the giving of corpora lutea to a marked degree furnishes that secretion which, when the ovaries are removed or cease to function, re-establishes

that mental, nervous and circulatory tone so necessary to a perfect metabolism.

There have been many monographs written upon this subject during the last fifteen years, but one peculiar phase, which is less dealt with in the literature, we would like to bring out from our experience as shown in the cases to be reported. That is the phase of disturbance to blood pressure and the chain of symptoms which accompany it.

Among the many symptoms found with the disturbance of the climacteric are the hot and cold flashes, due to the uncontrolled circulation, insomnia, extreme nervousness, pain in the epigastrium, tingling and burning in the nerve endings and the marked rise in blood pressure in which we are particularly interested.

In any number of cases in which we have seen this increased blood pressure, the elasticity and tone of the artery and vein seem to be affected and the distribution of the circulation is as marked as is the pressure. Only after a careful, differential diagnosis can proper treatment be organized in this class of cases because in one way and another they simulate so many diseases. If the menstruation is not irregular or there is no marked change so that the individual herself is able to discern it and her history does not tell it to you many different tangents may be taken before the patient is relieved. We have the high blood pressure found in the arterio sclerotic cases in which we get an elision of speech, slowing up of the mentality, disturbed reflexes, sharp, shooting, lancinating pains in the extremities, any or all of which symptoms may be found in early paresis, even the hand-writing being affected; and yet any one or all of these symptoms are complained of by individuals suffering at the change period, yet no hardening or thickening of the artery.

It is not the marked, well historied cases of menopause that I am bringing to your notice at this time—it is the tangled, obscure cases, those on which we make our mistakes, and the other fellow, digging them out, wonders how we could have missed them.

It is very necessary that the blood pressure be taken from time to time and the use of the corpora lutea be discontinued, should the pressure fall below normal. We have found the use of the corpus luteum extract very valuable in a natural menopause as in the artificial; by the artificial, I mean the menopause brought on by the removal of the ovaries.

In a number of cases of very high blood pressure, we have found it necessary to give im-



mediate relief by bleeding. In each of these cases, menopause seemed to be the cause of the marked disturbance and in two cases there was a marked edema of the lungs which cleared up immediately following the bleeding. In one case, where a mental disturbance came on suddenly, blood pressure was very high. Following bleeding, the patient slept and upon awakening, her mind was clear and by the use of corpora lutea at times, has been comfortable since.

CASE 1. Farmer's wife, age 50. Had been complaining for some time, been sick about a year, during which time menstruation had been irregular, kidneys had failed to function properly, digestion was disturbed, bowels were constipated, at times a marked diarrhea, complained of a pain in the region of the pylorus and the stomach. On examination, found heart was dilated and a mitral insufficiency; there was a well localized mass near the pyloric end of the stomach and liver. There was a marked edema of the legs and abdomen; urine contained albumin, blood pressure 190. After consultation, it was agreed that the mass in the liver region might be carcinoma; that the symptoms should be treated, but it was feared not much could be done for the patient.

A little later, distress from edema became so great that it was determined to bleed her, a pint and four ounces being taken. The edema left the legs and abdomen, kidneys began to function, pressure dropped to 150 and the mass which had been palpated in the abdomen disappeared. During the next four years there were a number of attacks of dyspnea, followed by dizziness with a general edema, kidneys ceased to function and pressure would be found very high. She was treated symptomatically with forced treatment of corpora lutea. After several days, all the symptoms would clear up and she would get comfortable.

The spring of 1916 found her gradually returning to good health. She did all her work in the house, helped with the fruit, and since then has seemed to be in good general health.

CASE 2. Age 46, hard working woman, thin, very nervous and excitable, bowels badly constipated, dizziness, hot flashes, gas after eating, abdomen bloats, a marked elision of speech, pupils unequal and irregular, slightly choked disc; co-ordination badly disturbed, reflexes greatly exaggerated, disturbance in memory. Wassermann test was negative, urine contained albumin, arteries slightly sclerosed, blood pressure 240. She was bled and in four days, pressure reduced to 190. Corpora lutea was given *t i d*, hot flashes ceased within a week. Along with this, a luetic treatment was instituted, digestive disturbance reduced, dizziness was relieved, pressure came down to 160, patient became quite comfortable, but the speech and locomotor affections remain about the same.

CASE 3. Age 54, farmer's wife, well-to-do people, always been hard working, healthy woman. Of late complained of dizziness, disturbed digestion, fullness in the head, periods of depression, loss of memory. When seen about 11 o'clock at night was in a badly disturbed, confused state, did not know her immediate family, talk was rambling, complained of a great deal of pain in the head. Family noticed the

unnatural condition of the mother about noon. Pressure was 220; heart negative, pulse rapid, full and bounding, some edema in the chest, face very red. She was relieved of about a pint and a half of blood, or until the pressure came down to 170. Within an hour she became quiet and dropped off to sleep. Next morning she seemed to be as rational as ever. She was given corpora lutea *t i d* and continued to use them at times when the symptoms would be distressing, and has been quite comfortable since.

CASE 4. Age 38, weight 68 pounds, had been a morphine user for five years. Five years ago had both ovaries removed, since then has suffered excessively from hot and cold flashes, pain in the epigastrium, hot, burning sensation in the skin; has had treatment for morphinism twice, but never entirely off. She had unequal pupils, exaggerated reflexes, loss of co-ordination, speech balled up, history of gastric crisis with a feeling around the waist like a hoop around a barrel. Gave a history of leuetic infection. Wassermann test positive.

Here we have three conditions: Morphinism, leuetic infection and menopause symptoms.

She was placed on treatment for morphinism. At the end of eleven days was off from it. As soon as her physical condition permitted, she was placed on sodium chocacodylate, 3 gr., followed by salversan, and corpora lutea 5 gr. *t i d*. She gained weight rapidly, so that in three months she weighed 122 pounds and the only symptoms remaining now are the hot flashes and the burning sensations of the skin which are relieved by taking corpora lutea for a few days when symptoms indicate use.

CASE 5. Age 41 years, usual weight 190 pounds; when first seen weighed 150, very nervous, hallucinated at times, full of fears, had a sensation of weight in the abdomen for three years, complained of not being able to walk as well as formerly finding it difficult to pick up her feet, loss of strength in her hands, complained of sharp, shooting pains all over the body, hot and cold flashes, memory affected, a sensation as though everything were hazy and blurred before the eyes. Knee reflexes were lost, pupils unequal, Argyll Robertson sign found, leuetic treatment instigated. Examination showed a large tumor mass in the pelvis, Wassermann test positive. Consultation was called to determine whether operation feasible. Operation showed a large fibroid uterus in which mass tubes and ovaries had been drawn. All were removed. Patient had slow recovery, was mentally disturbed for ten days or two weeks. Was placed on corpora lutea *t i d*; mental symptoms cleared, complained less of the menopause symptoms, leuetic treatment was continued. Within four months had gained from 112 to 175 pounds. Her gait is still affected, eyes improved. In this case the history of the eye disturbance is very interesting. A partially choked disc appeared in the right eye and then in the left. Under treatment, the eyes cleared up, much to the surprise of the oculist, a man of long experience, who said the eye sight would be completely lost.

CASE 6. Age 60 years. Menopause began at 50, has had more or less disturbance since, complains of pains in different parts of the body, gets choking spells, short of breath, has fears, at times unable to go to bed at night, sleeps in chair, has lost some

weight, gas after eating, bowels constipated, hot and cold flashes.

*Findings.*—Sways in Romberg's position; co-ordination good, pupils active, knee reflexes exaggerated; pulse 108, pressure 210. No history of lues, Wassermann test negative, urine negative, blood count negative, stomach analysis showed a hypochlorhydria; patient treated with dilute hydrochloric, corpora lutea t i d. Within two weeks pressure was down to 155, patient sleeping fairly well, eating better and feeling fairly comfortable.

CASE 7. At the age of 44 began having headaches, fullness in the head, irregular menstruation, hot and cold flashes, pains all over the body, memory affected, some speech elision, blood pressure 230. Had an attack of dyspnea with marked edema of the lungs and a slight stroke affecting the right side and the speech. She was bled about a pint and a half and was immediately relieved. Was later placed on corpora lutea t i d which she has learned to take at times when symptoms are distressing. Pressure seldom goes above 170.

CASE 8. Age 36. School teacher, fairly good health except became very short of breath, easily tired and very nervous. On examination, pressure was found to be 225; a large mass palpated in the right side of the pelvis. These were the only findings. Operation was made, large cyst removed on the right side which included tube and ovary, left tube and ovary pathological, removed. No history of infection. Good recovery was made. She continued to have menopause symptoms, placed on corpora lutea, pressure came down to 140, symptoms disappeared. In this case, the cause of the pressure was very obscure, but it is safe to say that it was one of those cases of a menopause state, as the operative procedure showed that the ovaries had ceased to function and treatment that followed gave relief.

## THE RELATION OF THE PHYSICIAN TO THE COMPENSATION ACT.\*

C. S. GORSLINE, M.D.

BATTLE CREEK, MICH.

Practice of medicine and surgery has experienced many changes in the past few years and doubtless will make many more in the near future. With the passing of the old family physician, has come the era of specialization and in this change the public have both gained and lost. The tendency of the times politically is socialistic and this influence is making itself felt in the practice of our profession. The workings of the Workmen's compensation law show that the state is more and more becoming the guardian of the individual and is assuming more or less of a protectorate over him. Where once the employe was supposed not only to stand the expense of any sickness or injury which might befall him, as well as losing his

wages during the time of his disability, the laws of most states have now provided that in case of accident, the employer shall furnish or cause to be furnished such surgical attendance and hospital care as may be necessary, for a stated period, and that the employe shall also receive a percentage of his wages during his disability. Certain states also require a system of compulsory health insurance, planned somewhat after the health insurance now in effect in most of the countries of Europe. In the State of Michigan there is no compulsory health insurance, but an optional law has been provided whereby an employer may, if he so chooses come under the protection and the workings of the Compensation act. This act is compulsory upon municipalities, but is optional with corporations, firms or individuals employing labor. Before this act was passed the employer had three points of defense: (1st) Contributory negligence, (2nd) The fellow-servant rule, (3rd) Assumed risk. Under the law as it now stands, all these defenses have been removed and the employe may bring legal action against an employer to any extent that he sees fit, provided this employer is not protected by previously enrolling himself under the Compensation Act. This law beside setting certain special percentages of compensation for certain injuries or disabilities, provides that the injured employe shall receive hospital and surgical attention for twenty-one days next following the date of the injury and that he shall receive half of his average wages after 14 days of his disability so long as he is disabled, provided, that if he is laid up eight weeks or longer he will also receive compensation at the same rate for the first two weeks as well. Immediately upon the taking effect of this law in September, 1913, numerous insurance companies began to provide insurance for the employer, based usually upon the hazard of the occupation the manufacturer was engaged in, and rated as to premium at so many cents per \$100 of payroll. This plan of course relieves the employer of all responsibility financially and otherwise in regard to the accidents, provided he sees to it that the injured employe is placed in the hands of competent medical and surgical care. Right at this point I wish to state that the Industrial Board has determined that the employer may choose what doctor shall have the case, provided his choice is a reputable and competent physician. If the injured wishes other advice or consultation, he is at liberty to call it, but at his own expense.

As might be expected, transferring the re-

\*Read before the Calhoun County Medical Society, Tuesday, April 3, 1917.



sponsibility in case of injury from the local employer to a foreign insurance corporation, which has no interest except that of fat dividends at the end of the year, necessarily gives rise to more or less friction and controversy. First, they are always eager to cut the injured man off with as little surgical care as possible and if possible, get him back to work within fourteen days to avoid paying compensation. On the other hand they are inclined to scrutinize, hypercritically, all bills rendered for service in his behalf, because every dollar saved, means dollars of dividends for the stockholders of the insurance company.

With conditions as they are, I think it well that each and every physician should have definite knowledge of what constitutes his legal rights in these cases. Many of the points that were disputed in the first months of the existence of the Compensation law, have not only been passed upon by the Compensation Board and placed on record, but have gone to the Supreme Court and permanently established. One of the points that the Insurance Companies try to make with the doctors is in regard to what constitutes the 21 days of treatment. The law says that "The employer shall furnish or cause to be furnished, competent professional care and hospital services, if needed, for 21 days" and the Compensation Board have ruled that in the working of the law, the term "accident" and the term "injury" are not necessarily synonymous, inasmuch as at the time of an accident, it may not develop that an employe has received any injury, but the Board holds that even after so long a time as six months or more if the progress of the case shows that injury results, the employe is entitled to the 21 days treatment notwithstanding. Doubtless all of you, as I have, have had bills returned with the statement that charges were made after the 21 days legal limit, dating the same from the time of the accident, but the Board holds and this is a matter which they cannot evade, that the 21 days shall date from the time when the employer first furnishes or causes to be furnished, professional aid. It is the same proposition as is met with in all commercial lines, the insurance companies will try by every means possible, to cut the doctor down to the last penny on his bill. I do not mean to say that this occurs with every company or in every case with any company, but it certainly is common. It therefore stands us well in hand to know what our rights are and stand out for them absolutely without compromising, only being careful that we are right in the be-

ginning. Each company is bonded by law to pay every reasonable legal bill, for only by so doing can they satisfy the requirements of the Board at Lansing, the Board having the whip-hand over them to the extent of securities to the amount of \$50,000, pledged to the State of Michigan in good faith to operate as the law requires, and doctors' and hospital bills and compensation are three points that must be taken care of to the satisfaction of the Board.

Many insurance companies try to make some contract with a local physician at reduced fees for taking care of the risks, which they may carry in any given locality, but in spite of this, the employer is at perfect liberty to employ any physician he may choose and these bills, so long as they are reasonable and conform to the usual charges made in that vicinity, must be paid without reduction.

Furthermore when special services, such as consultation, major surgical operations, X-rays or the expert services of the oculist are required, it is not necessary to get the consent of anyone before employing them. All that is required is to be able to show that the services are reasonable and necessary.

Many very grave responsibilities lie with the physician in charge, under the operation of this law. All concerned have to be governed very largely upon the physician's recommendations and judgment and one should be very careful that all opinions passed and all judgments rendered should be as nearly the exact truth as he is able to determine; in that way only will the ends of justice be fully served. It is at times very difficult to tell whether a man is maligning or not. In cases of alleged rupture, it may be impossible to state definitely whether disability in this regard existed previous to a certain alleged strain or not. Again in cases of strain in the back, it may be impossible to state otherwise than an opinion. In the former case where rupture is claimed, if it exists, the Compensation Board have been very liberal in their rulings and require that where the patient demands it, an operation with its attendant expense, must be furnished. Another peculiar point is that an employe who has been injured can recover damages if he is not restored to such an extent that he can perform the same work that he was doing when he was injured, even though he may be able and actually does take up some other occupation which carries with it a larger remuneration. It stands every employer well in hand to have his employes pass a thorough physical examination before they enter his employ, in order that old patho-

logical conditions for which he is in no way to blame are not pawned off upon him or the insurance company. This practice will also increase shop efficiency.

So far the Compensation Board have made no allowance in settling compensations for the fact that the man may not have been a good physical risk when employed, or that he had syphilis, sclerosed arteries, or tuberculosis or any other defect, holding it to be a fact that everyone has something the matter with him and that the ends of the law would be defeated if allowance were made for these cases. In my opinion the time is close at hand when every employer of labor must be safe-guarded by such previous examinations.

## THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.

H. S. HATCH, M.D.

LANSING, MICH.

The diagnosis of incipient pulmonary tuberculosis is not an easy matter. However, there are few conditions in which the early recognition of the process is so important, and there are few maladies in which the physician may so definitely save the life of his patient. Early diagnosis is no mystery, but is merely the reward of eternal suspicion and habits of carefulness on the part of the family physician, to whom these cases first apply for diagnosis. Upon the general practitioner rests the responsibility of diagnosis in the majority of cases, and for this reason he should be ever on the alert. As Sir William Osler has so tersely said, "The general practitioner is the man behind the gun in the combat of tuberculosis."

The question of early diagnosis cannot be answered by setting aside one or two constitutional symptoms and one or two physical signs and saying that these together in every case make up the symptom complex necessary for the diagnosis of clinical tuberculosis. A negative physical examination is not conclusive, and a prolonged observation of the general health is often necessary. There are some twenty-five or thirty symptoms which may accompany early tuberculosis, and it is characteristic of these symptoms that they are inconstant and indefinite. We do not find any single symptom, or any particular group of symptoms present under all circumstances.

The early diagnosis of pulmonary tuberculosis may, in certain instances, be made from

the physical signs alone, or from the symptoms alone. However, in order to arrive at an accurate conclusion it is usually necessary to weigh all the available clinical data; the history, the symptoms and the evidence furnished by a careful chest examination.

I wish simply to describe the basis for diagnosis which has been found to be of practical usefulness, and will omit unnecessary details; which are often more confusing than helpful.

First, in logical sequence, as well as in importance perhaps, is the history. Of special importance is the establishment of a definite history of exposure to infection, especially if that exposure has been intimate or prolonged, and *if it occurred during childhood*. The history of previous diseases should be gone into very carefully, and many cases of grippe and pneumonia will plainly spell tuberculosis when the details of the case are brought out by careful questioning. Protracted convalescence from grippe, bronchitis, whooping cough, measles, pneumonia and typhoid are suspicious, and should evoke further inquiry. A past history of enlarged cervical glands, pleurisy, either dry or with effusion, and fistula in ano can almost always be assumed to have been tuberculous. The history is very important and should be gone into in detail.

Symptoms are a most important factor in the diagnosis of active tuberculosis. Lawrason Brown says that "symptoms in the early diagnosis of tuberculosis are a more accurate guide to the presence of activity than physical signs; that symptoms without physical signs demand treatment, while physical signs without symptoms require only careful watching."

I wish to discuss briefly some of the more important and frequent symptoms occurring in early tuberculosis. I shall omit mention of the less important symptoms, which nevertheless are of some value as corroborative proof of the presence of the disease.

### COUGH.

This is very frequently the first manifestation of the disease noticed by the patient, and is so invariably present in tuberculosis that one cannot think of the latter without the former. In most cases cough is an initial symptom, but may be so slight or so overshadowed by other symptoms as to escape attention.

### EXPECTORATION.

Another more or less constant feature of pulmonary tuberculosis is expectoration. As with cough, one encounters marked differences



in this symptom, both in character and amount. In incipient cases it may be scanty, or absent altogether. The question of whether bacillary findings in the sputum are absolutely necessary before making a diagnosis is an hackneyed one. It is now the consensus of opinion that it is most frequently possible to make a diagnosis before tubercle bacilli appear in the sputum, and any physician who defers diagnosis on account of the absence of the bacillus, assumes a grave responsibility. Bacilli can appear in the sputum only after caseation and breaking down of a tubercle, and its discharge into a bronchus. Hence, when bacilli do appear, the case is, strictly speaking, no longer incipient. When possible, the specimen for examination should be the sputum raised in the morning. One should not be satisfied with one negative sputum examination. In suspicious cases, at least three different specimens should be examined on as many different days, before assuming that the sputum is really negative.

#### HEMOPTYSIS.

What I mean by hemoptysis is bleeding from below the glottis, without regard to the amount. Hemoptysis, in the absence of other causes, among all the symptoms, is the one of greatest significance. It is the initial symptom in about 12 per cent. of cases, and 60 to 75 per cent. of tuberculous subjects exhibit this symptom at some time during the course of the disease. It is now pretty generally agreed, that the occurrence of hemoptysis which cannot definitely be attributed to any other cause, should be regarded as proof of the existence of active tuberculosis.

#### TEMPERATURE AND PULSE.

An increase in the body temperature is probably one of the earliest indications of incipient tuberculosis, and is of great value, especially if other suspicious symptoms are present. Hence, a careful record of the temperature should be kept in every case. In early cases, the fever may range from 99.5 to 100.5 deg. reaching its maximum usually in the afternoon at about 4 p. m. This is not always the case, however; the rise occurring sometimes as early as noon, or as late as 9 p. m. For this reason the temperature should be recorded at least every three hours. The pulse is very frequently elevated, and is of low tension. A persistently rapid morning pulse is of some diagnostic value.

One of the very earliest symptoms of this disease is *loss of weight*. It is so early a fea-

ture that in some incipient cases it is the first to attract attention, and may even proceed with such rapidity as to be in striking contrast to the small amount of lung involvement. It should be kept in mind that tuberculosis is one of the most frequent causes of loss of weight.

#### HOARSENESS AND CHEST PAINS.

Hoarseness is often found as one of the symptoms of early tuberculosis. We all know how common it is in the advanced stages. I feel that we should pay more attention to the aching over the shoulders and over the upper portions of the lungs, and to chest pains, for it is remarkable the number of patients who complain of these pains and aches early in the infection.

#### PLEURISY.

Pleurisy with effusion has for years been considered as always tuberculous in origin by many; and of late the feeling seems to be growing that dry pleurisy should also be classed as tuberculous, until proved otherwise.

The study and correct interpretation of the physical signs of incipient tuberculosis demand our best thought. The signs are few, and often so indistinct as to require great pains for their detection. In view of these facts, it seems worth while to insist upon the importance of the following simple procedures during examination, the value of which the writer can vouch for from personal experience. The patient should be stripped to the bare skin, and down to the waist. The examining room should be quiet and the patient should be placed in a comfortable sitting position on a stool, with all muscles relaxed. In doubtful cases, two or three examinations on different days may be desirable. In many frank cases of pulmonary tuberculosis, physical signs are entirely absent, and this does not seem strange when we stop to consider that light changes which occur more than three-fourths inch below the surface of the lungs cannot be detected by physical examination.

In the examination of the lungs, the usual methods of inspection, palpation, percussion and auscultation are of course routine, and are generally in themselves sufficient.

#### INSPECTION.

In incipient cases the chest usually shows no marked changes from the normal, the phthisical or flattened thorax seldom being seen in this stage of the disease, although it is common in the advanced stages. Often the clavicle on the affected side stands out prom-

inently and often slight drooping of one shoulder may be noted. Lagging of one side during respiration may be seen early, and limited expansion may be present. A unilateral drawing in of the apex of the lung is especially significant.

#### PALPATION.

Under this heading the only point which I wish to mention is *muscle spasm*. Pottenger has called attention to the fact that with disease of the upper part of the lung the overlying muscles of the neck and thorax may be felt, best with the lightest palpation, to be more rigid and tense than those of the sound side. This sign may be present and well marked, early in the infection, and may in some cases be the only physical evidence of the presence of the disease.

#### PERCUSSION.

The amount of information obtained by percussion stands in direct ratio to the amount of change produced by the disease. If slightly impaired resonance can be made out at one apex, it furnishes information of immense significance. The careful determination of the height of the two apices is of value. If there is incipient tuberculosis of one apex, this may generally be demonstrated to be appreciably, although but slightly lower than the opposite apex. In determining slight shades of dullness, very light percussion should be used, and one must be keen to perceive slight differences in the pitch of the percussion note at the two apices, and must compare over and over again, if need be, the resonance of corresponding areas.

#### AUSCULTATION.

It is from auscultation that we obtain our most accurate information. Although every portion of the lung should be examined with the stethoscope, certain areas should be examined with special care. In the order of their importance they are the apices above the clavicle, the apices behind in the supra scapular fossae, the interscapular spaces and the first intercostal spaces. In early tuberculosis the breath sounds may show no changes. In many cases the first change is a roughening of inspiration with prolonged expiration. With progress of the disease, the breath sounds become more distinctly roughened and harsh until they finally become broncho-vesicular in type. Occasionally the breath sounds may be faint, but yet retain their normal quality.

Among the early physical signs, the *râle* is

the most definite. In 70 per cent. of incipient cases râles are latent, that is, are elicited only on coughing. Unless the patient is made to cough during the examination, these râles may readily be overlooked. Râles are best elicited by an expiration, immediately followed by a cough and a deep inspiration. It is often necessary to explain to the patient, best by example, how to cough. If, at an apex, a few râles can be constantly demonstrated, there can hardly be any doubt as to the presence of tuberculosis (Brown).

In order to make this paper as complete as possible, brief mention will be made of the more important accessory methods of diagnosis.

#### X-RAY.

The evidence furnished by the X-ray is very valuable as corroborative proof of the existence of tuberculosis. However, it does not differentiate an active from an inactive lesion except in the hands of a few experts, and for this reason a diagnosis of active tuberculosis should not be made from positive X-ray findings, in the absence of symptoms and physical signs. Early and slight lesions are detected much more readily by means of the X-ray plate than by the fluoroscope. A single X-ray plate is of little value; stereoscopic plates should always be made.

Of the various tuberculin tests, the *Von Pirquet* is the test of choice in children, especially those under five years of age, in which a positive result usually indicates tuberculous infection. The younger the child, the more certain is the result. In adults the test is of no practical value, as about 90 per cent. give positive reactions. This test has no contraindication in children.

#### THE CALMETTE TEST.

While generally condemned, this test is nevertheless being used, and is giving good results in the hands of many clinicians. The advantages of this test are its simplicity and ease of application, its rapidity and its applicability in febrile case, in which the subcutaneous method cannot be used. The Calmette test is contraindicated in the presence of ocular tuberculosis or a history of tuberculous keratitis or phlyctenular conjunctivitis. It should never be used a second time. Many authorities regard any form of conjunctivitis as a contraindication. The test is a very delicate one, and in suspicious cases, a positive reaction is fairly certain proof of the presence of active tuberculosis.



## THE SUBCUTANEOUS TEST.

This is very useful and valuable, but is dangerous if improperly used. For this reason, it should be resorted to only by those who are skilled in its use.

In conclusion, I wish to emphasize the following points:

1. In the majority of cases, an accurate diagnosis can be made only by a correlation of the data furnished by the history, symptoms and physical examination combined.

2. Symptoms are a better and more accurate guide to activity than physical tissue.

3. Prolonged observation of a case is often

necessary before a positive diagnosis can be made.

4. In suspicious cases an every three hour temperature and pulse record should be kept for several days.

5. Persistent rales at an apex mean tuberculosis almost invariably.

6. One should not wait for a positive sputum before making a diagnosis of tuberculosis.

7. Tuberculin tests are often very helpful, but should be used only in suspicious cases, in which a diagnosis cannot be made by other means.

*Dating of Biologic Products.*—William H. Park, Director, Bureau of Laboratories, Department of Health, City of New York, endorses the recently adopted requirements of the Council on Pharmacy and Chemistry that biologic products to be acceptable for New and Nonofficial Remedies must bear a statement of their date of manufacture. He believes that these requirements might well be made more specific and stringent. The rules of the New York Health Department governing the distribution of biologic products are: 1. The label on all bacterial vaccines must state the date the suspensions are made, standardized and killed. 2. The label on antitoxins shall give the date when the preparation was last tested. 4. The label on vaccine virus shall have the date when the virus was last tested. Dr. Park states that there is no intention of extending the potency date of bacterial vaccines (four months) or of serums (nine months) other than the antitoxins until there are very specific data on which to act. For vaccine virus 100 per cent. of "takes" is demanded. (*Jour. A.M.A.*, May 12, 1917, p. 1428.)

*Salvarsan in Tabes with Optic Atrophy.*—Some assert that salvarsan occasionally produces optic atrophy; others with extensive experience believe that it has no injurious effect on the eye. If given at all, it should be administered early in the disease. (*Jour. A.M.A.*, May 12, 1917, p. 1430.)

*K-Y Lubricating Jelly.*—The composition of this proprietary has not been divulged. Probably a simple tragacanth jelly will produce the same effects as this proprietary preparation. At the German Hospital, Philadelphia, a jelly made from tragacanth, 3 gm., glycerin, 25 c.c., phenol, 1.5 gm., with water to make 300 c.c. has been used for years. (*Jour. A.M.A.*, May 12, 1917, p. 1430.)

*More Misbranded Nostrums.*—The following "patent" medicines have been found to be marketed in contravention of the requirements of the U. S.

Food and Drug Act, chiefly because the medical claims were found untrue: Whitehall's Megrimine, capsules containing acetanilid, caffeine and salol (in one instance also capsules containing antipyrine and capsium). Brown's Blood Treatment, a liquid containing mercury and iodid. Classe's Great Penetrating Liniment, an alcoholic solution of ammonia, chloroform, opium, camphor, oil of sassafras, oil of origanum and a thujone-containing oil. Brown's "935" Injection (Formerly H. W.) a dilute solution of acetate and sulphate of zinc. (*Jour. A.M.A.*, May 12, 1917, p. 1427-8).

*Biologic Therapy in the War.*—According to G. C. McCoy, Director Hygienic Laboratory, U. S. Public Health Service, there are five biologic products—vaccine virus, diphtheria antitoxin, tetanus antitoxin, antimeningococcus serum, and antityphoid vaccine—which may be regarded as indispensable in connection with conditions which prevail when large bodies of men are brought together. The firms manufacturing these products can, if need be, meet the demands of our own army and civilian population as well as those of our allies. McCoy believes that with the good sanitary conditions that may be expected to prevail in our concentration camps, the need for vaccine agents not thoroughly tried out, such as antidysentery serum, antipneumococcus serum, and vaccines against dysentery, cholera and epidemic meningitis, should not be extensive with the possible exception of the meningococcus vaccine. (*Jour. A.M.A.*, May 12, 1917, p. 1413.)

*Citric Acid and Citrates.*—Citric acid and the alkali citrates, potassium citrate and sodium citrate, are oxidized in the body with formation of carbonates and hence tend to increase the alkalinity of the blood. Citric acid and the alkali citrates tend to render the urine less acid and, in large doses, render it alkaline (*Jour. A.M.A.*, April 21, 1917, p. 1206).

# TRANSACTIONS

## OF THE

### Clinical Society of the University of Michigan

Stated Meeting, April 7, 1917

The President, **CARL D. CAMP, M.D.**, in the Chair  
Reported by **REUBEN PETERSON, M.D.**, Secretary

#### REPORT OF A CASE OF FULL TERM ECTOPIC GESTATION RETAINED EIGHTEEN YEARS. OPERA- TION AND RECOVERY.

REUBEN PETERSON, M.D.

(From the Obstetric and Gynecologic Clinic, University Hospital,  
Ann Arbor, Michigan.)

The following case, because of its extreme rarity, has seemed to me worth recording:

Mrs. L. W., aged 46, married at the age of 23, entered the Clinic March 19, 1917. There is nothing of interest in her family or personal history. Her menstruation, which began at the age of 14, was of the four weeks type and has been normal. About a year ago her menstrual periods became irregular, her last period being in December.

So far as the history is concerned, interest centers in the present trouble. The patient comes to the Hospital for an abdominal tumor which has existed for eighteen years. Five years after marriage there was cessation of menstruation, the usual morning sickness and enlargement of the breast. There was a gradual increase in the size of the abdomen until at the ninth month she was as large as a woman at term. She felt life at the fifth month but does not remember at what time movement ceased. She thought she was pregnant but never had any labor pains. Shortly after the cessation of menstruation for nine months, she began to flow regularly again. She remained the same size, that is, the size of a woman at term, for two years, then gradually became smaller. For the past six years her abdomen has been about the size it was when she entered the Hospital. During the past year she has not been feeling well and has lost ten or fifteen pounds.

Examination showed an abdominal enlargement extending from the pubes to the umbilicus.

The tumor rose rather abruptly from the pubes, the highest point being half way between this point and the umbilicus. The growth was symmetrical, smooth, somewhat tender and distinctly fluctuating. It was fixed and apparently quite densely adherent to the parietal peritoneum.

Vaginal examination showed the cervix to be somewhat back in the pelvis and to the right. Posterior to the cervix could be felt an irregular, tender mass about the size of a small hen's egg apparently attached to the tumor which could be made out as a cystic mass by palpation through the culdesac. It was impossible to palpate the appendages.

Unfortunately I examined the patient before a careful history had been taken and only ascertained that she had had the tumor for eighteen years. Because of this long duration, the cystic mass, arising from the pelvis and unconnected with the uterus was thought to be a parovarian cyst. However, just before the incision was made, the assistant informed me that when the tumor appeared eighteen years before, the patient thought she was pregnant but never had had her baby, although the tumor persisted. It was then remarked that in all probability we were dealing with an ectopic pregnancy but unfortunately the tentative diagnosis was made too late to X-ray the tumor, as the results of such an examination would have proved most interesting.

Upon cutting through the abdominal wall, the fluctuating sac was found densely adherent to the parietal peritoneum, omentum and portions of the intestine. These adhesions were exceptionally dense, much more so than in the case of the ordinary inflammatory neoplasm. A normal ovary was attached to the cyst wall and the tube could be traced over the surface of the sac, showing that it was a tubular and not



an ovarian pregnancy. During the enucleation of the sac the latter was nicked in one portion, giving exit to an oily fluid of about the consistency and color of pea soup. The nodule, felt through the vagina was separated from the cyst and removed later. Considerable hemorrhage resulted from the enucleation of the sac on account of the dense adhesions and the patient was quite shocked at the completion of the operation. However, she soon rallied and has made a good recovery.

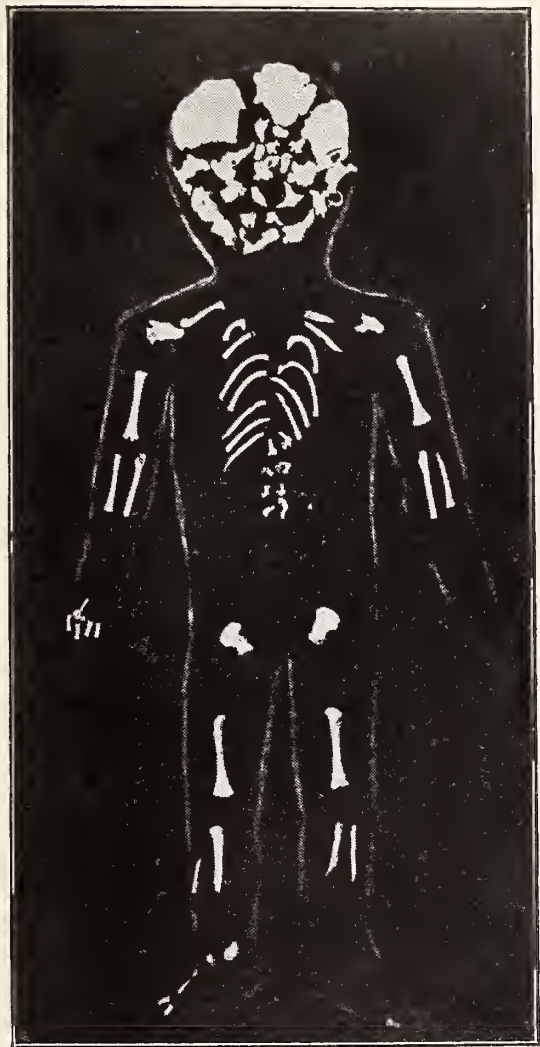


Fig. 1. Photograph of the bones of a full term fetus retained 18 years. Bones identified and arranged in their proper positions.

When the sac was cut open it was found to contain the greater portion of a fetal skeleton. Dr. Sherrick has taken considerable pains to arrange the bones in their proper positions upon this black velvet in order that they may show better. (Fig. 1.) Professor McCotter has gone over them carefully so as to identify them and see that they were arranged correctly. In his opinion the bones are from a nearly if not quite a full term fetus.

The nodule, removed separately, turns out to be a portion of the calcified cerebellum. This portion illustrates what happens in certain cases of retained ectopic gestation where the fetus is beyond the fourth or fifth month, that is, the deposition of lime salts in the fetus and the formation of a lithopedion. In other cases, the fluid in the sac is absorbed, the membranes hug the fetus from which all fluid is absorbed, giving rise to a fetal mummy. Again, the fetal mass may be changed into a kind of soap—saponification. Or, finally, as in this case, the soft parts of the fetus are absorbed, the bones becoming disjointed, “skeletonization” of the fetus resulting.

The literature furnishes many examples of what may happen when an ectopic pregnancy goes to full term, the fetus dying after fatty degeneration occurs in the placenta. Formerly, these cases were only discovered at autopsy for the patients were never operated upon. Now, the condition is usually recognized prior to the death of the fetus, and both mother and child saved by a timely operation.

I have only had time to glance through the literature but I found the records of one case, a lithopedion, where the fetus was retained fifty-five years. In many cases the sac becomes infected and after a longer or shorter time the fetal bones find their way out externally through the intestines, vagina or bladder. In this particular case suppuration did not occur, else undoubtedly the fetal bones would have been discharged, instead of remaining in the sac.

#### REPORT OF A CASE OF VISCERAL LUES.

UDO J. WILE, M.D.

(From the Clinic of Dermatology and Syphilology, University Hospital, Ann Arbor, Michigan.)

The case which we have to show tonight is perhaps one better spoken of as a suspected case of visceral syphilis, because we have no more than presumptive evidence that the man has visceral syphilis.

This patient, a man of 55 years of age, consulted the out-patient department of Medical Clinic some three or four weeks ago complaining of a long history of gastric disorder, frequent attacks of biliousness, sour stomach, and within the last year or two, of a progressive emaciation.

The physical examination as carried out at that time by Dr. Marshall, showed a man who might well lead to the suspicion of a neoplasm. Without being emaciated, he was decidedly

cachectic in appearance. He had the peculiar lusterless condition of the hair which goes with malignant disease, and the examination at that time with regard to his gastrointestinal tract revealed a mass in the fundus of the stomach which was tender to palpation and which showed itself in the X-ray picture as a decidedly definite functional gap in the stomach similar to that which one gets with gastric carcinoma. In the course of his examination it was revealed that he had had syphilis some fifteen years ago. The gastric disorder started in 1898. So in a man who has had symptoms of chronic dyspepsia for a long period of time there is a gradual onset of pain, of a mass in the stomach, of a slight degree of emaciation and rather a marked degree of cachexia. Obviously this is the picture of a carcinoma. On the other hand, we know that he had syphilis fifteen years ago and that he has still a ++++ Wassermann on the blood.

The question arose as to whether he might have, instead of a gastric carcinoma, a gastric syphilis, and that brings us to the discussion of syphilis of the stomach itself. I may say that there is no clinical gastropathy which may not be simulated by syphilis, and conversely, there is no syphilitic gastropathy which has a typical clinical picture characteristic of syphilis. Thus, we recognize syphilitic round ulcer with exactly the same clinical picture as the ordinary gastric ulcer. There are cases of gastric gumma which are identical in their onset, clinical course and aspects with gastric carcinoma. If either of these two processes occur in or about the pylorus, one has the picture then of stenosis and contraction exactly as one can have from the healing of a pyloric ulcer, or from a pyloric cancer. A third form of gastric syphilis is recognized as a diffuse sclerosing process which gives rise to hourglass constriction by cicatrization in the mucosa and the muscularis of the stomach itself.

With this short introduction, it is obvious that it is impossible to diagnose gastric syphilis except on presumptive evidence, or on pathologic examination either at the operation or at the postmortem. And all of the cases of gastric syphilis which have been recognized and will stand the test of a careful scrutiny are those in which the diagnosis has been made either at the postmortem or at operation, usually for suspected carcinoma or ulcer. There are, however, a large number of cases in which the evidence of a gastric syphilis is presumptive and in which all of the symptoms disappear so completely and with such a remarkable

influence upon the general and local condition that one is forced to believe that they are cases of syphilis of the gastric mucosa or submucosa. We have had in this Clinic such cases and they have been made the subject of a great deal of study.

In Dr. Hewlett's clinic two years ago we had a patient in the last stages of what was apparently gastric carcinoma. He had the most severe degree of emaciation, anemia and cachexia with a large fist-sized mass in the epigastrium which from the X-ray picture was attached to the gastric wall. The man was in extremis when he came into the Hospital. In the routine examination it was found that he had a ++++ Wassermann reaction on his blood, and it seemed at least possible that he might have instead of a large neoplasm of a malignant type, one of the granulomatous type. Simply on this chance, he was transferred and treatment instituted, and he recovered completely within two or three months with complete disappearance of the tumor mass and resumption of the normal function of the stomach and restitution to complete health.

Now, such a case as this, we have before us tonight. This man's trouble became worse about a year ago. He had lost some ten pounds in weight within the last few weeks before his entrance. He had very severe pains in his stomach and the history of what might have been any form of chronic gastric disease, particularly, however, gastric neoplasm. The X-ray report I should like to read in brief. The first report showed the characteristics of a malignant defect.

"Stomach fills fairly normally, though it is narrow. There is no primary segmentation. Apparently there is a defect in the cardiac end. The greater curvature cannot be modified by manipulation but is not spastic, and is somewhat irregular. Pylorus and cap are not at all seen. This defect has all the characteristics of a malignant defect."

The patient was placed upon specific treatment and within two or three weeks he has changed very materially so far as the general condition is concerned. He has gained fourteen pounds and feels very much relieved. The pain is markedly decreased. The spasticity of the abdominal muscles is decidedly less but one cannot feel a definite mass in the stomach. However, we have never been able to feel a mass. The second X-ray report says that the comparison of the two plates leaves the operator in doubt as to whether the condition has or has not progressed



The question as to whether or not this man has gastric carcinoma or gastric lues, I do not believe is settled at all by the mere gain in weight and in general condition as the result of his specific treatment. If he has a gastric carcinoma and constitutional syphilis, then he will improve insofar as the specific infection is concerned, and a temporary gain in weight might not be unexpected at all. One must always consider too, that gastric carcinoma not infrequently occurs on the bases of previous syphilitic ulcers and in the scars of such, or indeed, a large gumma through its becoming necrotic, could easily become malignant, so that one may have both conditions present. I do not think that the temporary improvement can be regarded as anything more than presumptive evidence that the neoplasm that he has is a granuloma rather than a cancer neoplasm. If he has a lues and a carcinoma, the lues is not only in the stomach, but it is all over, in the bone marrow, spleen, etc., and one would expect that he would be in a worse condition with both diseases than he would be with only one, and if he were relieved from one condition he should improve materially. The case is one which will be proven only with the lapse of time, and if this man has a gastric gumma, he should show marked improvement, in fact a total disappearance of practically all the radiographic findings. If these disappear, then I think that in association with all of the other evidence, one would be justified in saying that this is probably a case of gastric lues. On the other hand, if he improves up to this point and the neoplasm remains as a definite mass which can be seen, then, of course, the prognosis is not materially benefited by his treatment, and the other diagnosis will stand.

Three points I think are to be emphasized in the study of the syphilitic gastropathies: First, that there is nothing at all characteristic of their picture. There is nothing pathognomonic of their picture. The positive Wassermann cannot be regarded as anything more than presumptive evidence. A patient may have both diseases.

The second point to be emphasized is that carcinoma and lues of all viscera stand in a very distinct relation one to the other, namely, that malignant degeneration is particularly likely to take place in old syphilitic strictures and recent syphilitic ulcers.

The third point of interest is that improvement, unless it be accompanied by *restitutio ad integrum*, must be taken only as more presumptive of the specific nature of the disease.

## DISCUSSION.

DR. Q. O. GILBERT: I remember well the one case about which Dr. Wile spoke. At that time, as I remember, we were unable to differentiate at all between syphilis and carcinoma and he was given treatment because the affection was inoperable if it was carcinoma and there was a reasonable supposition that it might be syphilis.

Two years ago I had the privilege of performing the autopsy on a man who died after two days of violent paroxysms of general paresis. At autopsy the immediate cause of death was found to be a diffuse hemorrhage into the stomach and the gross finding was seven ulcers in the stomach. One of them was perforated through so that I could stick my small finger through the hole. This had a very hard rounded edge and it was walled off by the omentum. There was no obstruction of the pylorus. The other ulcers were all hard, indurated and definitely circumscribed, somewhat different from the ulcers which I have seen in ordinary peptic ulcer cases. I would like to ask Dr. Wile if the ulcers in the cases of lues have the characteristics of ordinary syphilitic skin ulcers, because in this case the ulcers certainly had the appearance of tertiary skin ulcers rather than ordinary peptic ulcers.

DR. MAX PEET: I would like to ask Dr. Wile how he would distinguish between a carcinoma and syphilitic granuloma upon opening the stomach.

DR. WILE: I am very glad that Dr. Gilbert brought up his point. There are two distinct types of ulcer, one which simulates simple peptic ulcer, and then there are multiple ulcerative gummata which give rise to multiple syphilitic ulcers of the stomach corresponding to the nodular ulcerative syphilids of the skin. Those cases are so rare that Dr. Gilbert's case should be described if it has not already been put into the literature. The simple round ulcers are due to syphilitic endarteritis. Many of the cases have almost ruptured without a peritonitis due to the fact that the omentum has glued itself to the peritoneum. The case which Dr. Gilbert describes is one of the very few cases of the very characteristic multiple syphilitic ulcers. The symptoms of such cases are usually those of chronic catarrhal gastritis with more or less hemorrhage.

DR. GILBERT: This patient sat around in a psychopathic institution. He was very depressed and complained all the time. The sister who had seen him for a number of years said that at times he had very marked gastric disturbances of a dyspeptic order. I could get no definite history of hemorrhage. The clinical observations of the patient were very poor and meager.

DR. WILE: With regard to Dr. Peet's question, I am not prepared to answer because I have never

operated for either condition. But at the postmortem I think that one could tell rather easily by sectioning through the mass. The gummous mass, of course, does not as a rule look like carcinoma. In the one there is definite circumscription, in the other infiltration. The surface appearance of both is also quite different. The syphilitic process, of course, would start in the submucosa. I don't know that the surface appearance of the stomach without opening the organ would tell anything. I should think that one would find the peritoneal coat much more vascular in carcinoma. In syphilis the peritoneal surface is usually anemic. Glandular nodules occur, of course, quite commonly in syphilis.

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### SPINDLE CELL SARCOMA ARISING IN A CAVERNOUS LYMPH AND HEM- ANGIOMA OF THE MUSCULO- SPIRAL NERVE.

MAX MINOR PEET, M.D.

(From the Surgical Clinic, University Hospital, Ann Arbor,  
Michigan.)

Tumors of nerves occur very frequently, but are usually benign in character. Probably the best known type is the amputation neuroma which develops on the cut end of any large nerve and is usually painless unless caught in scar tissue. A less well known, but comparatively common type is the multiple neurofibromatosis which occurs in nerve trunks. This type is usually congenital, often shows a heredity tendency, and the tumors very seldom undergo malignant change.

The multiple nerve tumors which occur in the skin, a condition often spoken of as *molluscum fibrosum* or von Recklinghausen's disease and usually congenital, also rarely undergo malignant change.

The plexiform or cirroid neuromas, probably always congenital in origin, undergo malignant changes more often than those previously mentioned.

The type of nerve tumor found in the following case report, a cavernous lymph and hemangioma, is very rare and a rather careful review of the literature failed to disclose any tumors of this type which had undergone malignant change.

It is because of the rarity of the tumor and the few symptoms which it manifested as well as to call attention to a condition which was apparently benign until the operation revealed

its malignant character that the following case is reported.

Mr. H. B., age 65, was referred to us by Dr. Hawley of Bronson, Mich. He came to the University Hospital February 17, 1917, complaining of a small lump on the left arm, three inches above the elbow, which is painful on pressure. This lump was first noticed in October, 1916, at which time it was tender on pressure. Neuralgic pains are felt over the dorsum of the hand on the radial side. The tumor has increased slowly in size and is now felt as a smooth oval mass, the size of a small hickory nut, rather deep under the skin, to which it is not in anyway adherent. Slight pressure causes pain in the tumor and over the dorsum of the hand.

Because of the high blood pressure, 235, the operation for the removal of the growth was performed under local anesthesia.

On February 17, 1917, after preliminary intradermal infiltration with Schleich's solution an incision was made over the tumor and a rounded, more or less pyriform shaped growth exposed. The tumor was extremely sensitive to the slightest manipulation. This was overcome by injecting one-half c. c. of Schleich's solution directly into the musculospiral nerve above the tumor. On completely dissecting the mass it was found to embrace the nerve completely, the upper and lower ends of the growth tapering out on the nerve trunk. No nerve fibers could be seen passing in the capsule of the tumor and since many nerve tumors can be shelled away from the main nerve bundles, the hard, fibrous mass was split open longitudinally. No nerve fibers could be seen, but two cysts, one about a centimeter in diameter and the other smaller, containing a clear, slightly yellowish fluid, were disclosed in a solid mass of tissue resembling sarcoma. With the belief that the growth was malignant it was excised, the musculospiral nerve being cut about one centimeter above and below the mass. The nerve ends were united end to end by sutures of 000 silk and the line of approximation protected from the ingrowth of connective tissue by wrapping the nerve in a very thin sheet of celloidin. The wound was closed and the arm put up in the right angle position to prevent pulling on the nerve sutures. Wrist drop was of course present.



In a communication from Dr. Hawley, April 1st, he reports that the patient has had no pain since the operation, has excellent use of the arm, pronation and supination are unimpaired, and he is not hindered by the wrist drop.

If the nerve suture is successful, the action of the musculospiral nerve should return in six to eight months.

The pathologic report made by Dr. Warthin and Dr. Weller is: Spindle cell sarcoma arising in a cavernous lymph and hemangioma.

The unusual findings in this case, apart from the rare type of nerve tumor found are the late onset of symptoms, dating for only four months, although the tumor was undoubtedly congenital, and the fact that no nerve fibers could be demonstrated macroscopically, nor in the microscopic section for pathologic diagnosis, although no impairment in the muscles supplied by the musculospiral nerve existed prior to its necessary division at the operation.

The lack of pain until October last may be explained by the assumption that the tumor just before that time underwent malignant change and the consequent increase in growth pressed upon the nerve fibers.

#### CONCLUSIONS.

A cavernous lymph and hemangioma in which had arisen a spindle cell sarcoma, was found in the course of the musculospiral nerve, completely enveloping the nerve, but without the production of any symptoms except pain in the distribution of the nerve on the dorsum of the hand and in the tumor on direct pressure. The growth was apparently benign until its malignant character was revealed by operation. Painful tumors situated in the course of a nerve should be excised, as the possibility of malignancy always exists.

#### DISCUSSION.

DR. HARRY MALEJAN: I think Dr. Peet is to be congratulated on his successful operation in the removal of this tumor. In a great many of these cases which undergo sarcomatous degeneration, the function of the nerve is destroyed. It is interesting to note that in fibromata or neuromata of the nerve trunks of the arm, the median and ulnar nerves are usually affected. The musculospiral nerve is very rarely affected. I have never seen a report of the involvement of this nerve. In this case, of course, the musculospiral nerve was affected just above the elbow joint.

## REPORT OF A CASE OF AMELANOTIC MELANOTIC SARCOMA.

H. M. MALEJAN, M.D.

AND

V. RUSSELL, A.B.

(From the Surgical Clinic, University Hospital, Ann Arbor, Michigan.)

In a recent report by Coley and Hoguet on ninety cases of melanotic cancer the following brief history of melanomas is given:

"Melanotic sarcoma or melanoma, one of the most common varieties of malignant tumors was first described as occurring in horses in the latter part of the 18th century. (Broguorne in 1784 and Satournelle in 1809). Lannaec was the first to write about this type of tumor in men. In 1806 Lannaec and Bayle published a report of cases of melanotic tumor of the lungs and other organs. For a number of years our knowledge of these tumors advanced but little except for the study of veterinary surgery which showed that they usually occur in animals with white skin and that the condition is hereditary and capable of transmission from one generation to another.

"The question as to the origin of these tumors is one much discussed and about which there is much disagreement. Discussion is rife even in our midst. One faction assures us that the etiology is epithelial while the other faction is equally positive that the origin is from the connective tissue. Probably both are right."

In our case, that of Mrs. E. W. the origin seems to have been from the connective tissue. The pathologic diagnosis on a gland which was removed from the neck intravital and which showed metastasis, was that the "tissue is entirely a malignant neoplasm of the type of an endothelioma. It shows no pigment." Naevi may give rise to nonpigmented sarcoma and the metastases are not always pigmented (Byrant & Buck Vol. VII, Page 387). Our diagnosis of melanotic sarcoma was confirmed antemortem.

Our patient, Mrs. E. W., age 37, entered the University Hospital Feb. 6, 1917, complaining of constant pain in the right shoulder radiating down the arm and into the fingertips. The family history was negative and unimportant. Personal history was negative. Examination revealed the source of trouble in the right supraspinatous region of the scapula. The sketches

and photograph (Fig. 1) made soon after the entrance of the patient show the lesion better than a description. I wish here to thank Miss Margaret Miller for her kindness in making these sketches. The history of the origin and treatment is quite typical. Four years ago in June the patient noticed, after bathing, that a dark, brown, flat spot about as large as her thumb nail had developed on the right shoulder since her bath the previous week. About a year later the pigmented area began to rise up from the surface of the skin and in a few weeks ulcerated spontaneously, yielding a sero-



Fig. 1. A Case of Amelanotic Melanotic Sarcoma.

sanguinous discharge and growing peripherally always in semilunar configuration. The patient described the ulcer as being "black as ink." Pain of a cutting character began to be troublesome.

From this time on till last December the history is that of recurrent ulceration and healing. There were visits to several physicians, and treatment ranging from actual cauterization and the application of salves of varied hue, to cranberry poultices. The cranberry poultices seemed to be the most efficacious and seemed to stop the pain though, strangely enough, not the spread of the ulcerating area.

At one time there was a period of healing when the scar presented red and smooth with no pigment. It remained so for a month. Then tiny black spots appeared at the border, enlarged and became confluent and finally formed a black lesion on the scar base. This broke down, crusted and ulcerated again and so on.

Two years ago a small, hard, painless lump developed on the right side of the neck. This grew gradually and when the patient came to us it was the size of an orange and very sensitive.

As has been noted before in similar cases, the very rapid decline of the patient from the time when she entered in apparently fair health, till her death five weeks later, seems to have been precipitated by her confinement in early January. The glands in the neck grew more rapidly from September on and pain in this region and down the arm started then. In December, however, the ulcer healed and remained so. While in bed following delivery and eight weeks before death, a small lump was noticed at the vertebral angle of the right scapula. At autopsy this was as large as a man's fist. The liver, though large and tender when she came in, increased appreciably in size almost from day to day.

The clinical picture was that of a steadily progressing cachexia with much sharp pain, sometimes in the arm, sometimes in the scapular region and again in the neck. Aspirin relieved this for a while and then codein became necessary. There was an intermittent nausea and vomiting. Two X-ray treatments were given. Three days after the first one the patient had a chill followed by a rise in temperature of  $102.2^{\circ}$ . From this time on her temperature showed irregular elevations.

Two weeks before death the patient noticed that her urine on standing became very dark colored. March 12th the ferric chlorid and bromine water tests for melanine were both positive on a twenty-four hour specimen. The skin during the last week had a faint icturic tinge. March 10th the patient had hallucinations and was mentally confused until the last day when she went into coma and died in cardiorespiratory failure, March 13th.

Patient was referred to Dr. Warthin's laboratory. At autopsy the healed scar was found



to be superficial. There was a conglomerate mass of pigmented glands imbedded in the tissues low in the right axilla and attached firmly to the inner surface of the scapula. The center was necrotic. In the right cervical region and connected beneath the clavicle with a mass in the right axilla was another mass of pigmented glands, also showing areas of caseation necrosis.

The liver was enormous, weighing 4,400 grams and extending on the right from the third intercostal space to about four fingerbreadths above the iliac crest and on the left to the nipple line in the fourth intercostal space and three fingerbreadths below the costal margin. It was made up of a mass of new metastatic nodules, varying in size from that of a millet seed to a walnut, and imbedded close together in atrophic liver substance. These nodules were soft and not pigmented. The larger ones had caseating centers.

The lungs showed numerous, buttonlike, subpleural, recent, nonpigmented metastases, mostly at the bases. A few were in the lung substance. There were a few small nonpigmented nodules in the spleen, as seen on section.

The mediastinum, bronchial lymph nodes and kidneys were macroscopically negative as regards metastases. The retroperitoneal lymph nodes were hyperplastic and dark gray.

These findings group the case with the melanomas showing visceral involvement in contradistinction to the other so-called "pepper seed" variety where the metastases are numerous bluish or blackish nodules in the skin.

Because of the relatively nonpigmented character of the sarcomatosis Dr. Warthin made a diagnosis from the gross of amelanotic melanotic sarcoma. A subsequent report will be made detailing the microscopic pathologic findings of this case and of several others.

*Pharmacology of Stovaine.*—M. I. Smith and R. Hatcher find that in toxic doses stovaine produces death in animals by inducing immediate and simultaneous paralysis of the heart and the respiration, the action on each being independent of the other. They find that stovaine disappears rapidly from the blood stream after its intravenous injection. Stovaine is slightly more toxic than novocaine by similar modes of administration and complete recovery does not follow the administration of toxic doses of stovaine so promptly as it does with corresponding doses of novocaine (*Jour. Pharm. and Exp. Thera.*, Jan., 1917, p. 231).

*Hexamethylenamin in Pyelitis.*—I. A. Abt advises caution in the administration of hexamethylenamin in the pyelitis of infants. It should be under continuous observation and its use should be continued for an extended period. The urine should be frequently examined for blood. Abt has more than once seen cases of fatal nephritis which he believes due to overuse of hexamethylenamin. He advises that, if even to infants under one year of age, it should be given in one grain doses followed by water. This dose may be repeated four or five times daily (*Jour. A.M.A.*, April 14, 1917, p. 1100).

*Abolition of the Salvarsan Patent.*—The Chicago Medical Society and the St. Louis Medical Society urge the abolition of the salvarsan patent. The patent should be abrogated, not only because the patentees have not supplied the demand, not alone because they have dictated to the medical profession who should have the drug and how much a physician might have, not alone because of the war with Ger-

many, not alone because of the special needs of the government at this time for the control of venereal diseases, not alone because, as some claim, the patent at Washington does not correctly describe the product, but also because the people who are supplying this product are charging prices that are exorbitant. In order that a sufficient supply, to control the ravages of one of the most serious diseases that afflict humanity, may be assured, it is the duty of Congress to abrogate the Salvarsan patent (*Jour. A.M.A.*, April 21, 1917, p. 1187 and 1203).

*Examination of Ambrine and Various Paraffins.*—P. N. Leech of the A.M.A. Chemical Laboratory reports on the composition and properties of Ambrine and the various preparations proposed for the treatment of burns. He finds that the French proprietary Ambrine—exploited in the United States as Hyperthermine and Thermozone—is essentially paraffin in which a small amount of a fatty oil and asphalt is incorporated. A preparation similar in composition but superior to Ambrine in physical properties may be made by dissolving 3 to 5 drops asphalt varnish in 1.5 cc. of olive oil and adding this to 97.5 gm. melted paraffin melting at 47.2 C. It is probable that for most purposes simple paraffin will answer just as well as Ambrine or the mixture proposed in its place. Whether used alone or in mixtures, the physical properties of the paraffin are most important. Paraffin U. S. P. will not answer, and hence the properties of many commercial brands of paraffin were determined and the best products are designated. (*Jour. A.M.A.*, May 19, 1917, p. 1497.)

# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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### EDITOR

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Grand Rapids, Mich.

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All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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July

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### Editorials

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#### PATRIOTIC COMMITTEES.

We trust that every component society has accomplished the appointment of its local Patriotic Committee. Please be certain that the name of the chairman of your committee has been forwarded to the State Secretary. Likewise promptly report the names of all your members who have gone forth to active service.

In order that our supervision of the interests of each enlisted member may be effectual it is imperative that informative data be promptly submitted. We are keeping a tabulated record of every enlisted doctor and desire the fullest information attainable.

These Patriotic Committees are charged with important duties. The Council insists that you become and continue aggressively active. Please answer all communications promptly.

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#### NEWS FROM THE FRONT.

We have written to some and extend the invitation to all of our members who enter into service in the army or navy to write to *The Journal*. Your fellow members at home will be exceedingly eager to learn what you are

doing and to read of your experiences. Your Editor invites your correspondence.

We know you will be busy, still we nourish the hope that you will be able to find the time to write to us "From Somewhere." Send us photographs, if the censors will permit, and impart such information and description as may be transmissible through the mails.

If the response is sufficient we propose establishing a special department for the publication of correspondents' contributions.

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#### ORIGINAL ARTICLES.

The postponement of our annual meeting threatens our editorial drawer of original articles with complete depletion. The source of our original articles has been mainly the papers presented at the sessions of our several scientific sections. Consequently we are approaching the end of that supply.

We take this opportunity of soliciting carefully prepared, timely and instructive original articles from our members. Please utilize the opportunity of what leisure time you have available to contribute, for publication, to your *Journal*.

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#### WAR SURGERY.

Can we at the present time draw definite conclusions or enunciate new principles and methods of treatment with any degree of assurance that they are tenable? We are of the opinion that the experiences encountered in field, evacuation and base hospitals are not, as a whole, applicable to civil practice.

Prominent in our literature are articles presenting statistics, summaries, principles and conclusions. Our medical gatherings are being addressed by speakers who have served periods of three months to two years in foreign hospitals. Dogmatic statements are being made—many of them unwarranted. Were we to believe all that is being spoken and written we would indeed feel that we were resting on crumbling foundations of erstwhile surgical principles that must now be cast aside for these newer things.



We are being told that compound-comminuted fractures should be treated by early amputation. That wounds opening the knee joint will result in death if amputation be not promptly performed. That in comminuted-compound fractures of the hip if the head of the femur is not disarticulated death will promptly result. That tap-water is as effective as iodine. That in wounds of the soft parts the exposed area should be immediately excised. These are but a few of the dogmatic enunciations of certain returned enthusiasts. We protest against them and decry the efforts set forth seeking to secure the adoption of these practices in present day emergency and industrial surgery.

While it may be true that the observance of these practices in field and base hospitals is accomplishing a lowered mortality the same conditions do not prevail in civil practices. We are told how these military surgeons are over-worked—of the thousands wounded brought in in a single day. How the demand of operative treatment is so heavy that the after-care is by necessity delegated to nurses and meagerly trained helpers. It is no wonder then that the primal operative procedure must of necessity be radical and hurried with complete ignoring of finer details and principles. The surgery performed is perforce devoid of constructive and conservative measures. It may be true that this is necessary for military purposes and exigencies; it does not follow that the same is applicable to civil practice.

We are still possessed of the assurances that conservation is applicable in our civil surgery and that with deliberate operative work, detailed and careful post-operative care amputations, infections and fatal complications may be circumvented. The surgeon who has served in a military hospital must needs readjust himself to civil practice or be considered as “hewer of limbs” whose methods are unsafe, unwarranted and uncalled for in present day industrial and emergency surgery.

#### UNPAID DUES.

The following is a list of members whose dues were unpaid on June 1st, 1917. Their

names were removed from our mailing and membership lists and these men are now classified as suspended. They are also without the protection of the Defense League.

We are unwilling to see these men drop out of the ranks. Many of them have permitted their membership to lapse by reason of carelessness. We urge that the list of your county be perused and that you personally call the attention of these men to their suspension and that the necessary steps be taken to become reinstated.

#### ALPENA.

J. W. Small .....	Alpena
A. A. Stuart .....	Lincoln
John Wilson .....	Spruce

#### ANTRIM, CHARLEVOIX, EMMET.

C. J. Beaver .....	Mancelona
A. T. Bodle .....	Bellaire
J. B. Brown .....	Levering
J. E. Dobson .....	Pellston
W. H. Marshall .....	Boyne City
R. R. Miller .....	Harbor Springs
E. R. Moorman .....	Pellston
C. J. O'Brien .....	Pellston
W. H. Parks .....	East Jordan
W. W. Walton .....	Almira
R. H. Wessels .....	Mancelona

#### BARRY.

G. W. Lowry .....	Hastings
S. C. McIntyre .....	Woodland
J. W. Rigterink .....	Freeport

#### BAY.

C. W. Ash .....	Bay City
S. L. Ballard .....	Auburn
V. H. Dumont .....	Bay City
Nina Ely .....	Bay City
E. J. M. Flynn .....	Bay City
H. M. Gale .....	Bay City
J. A. Keho .....	Bay City
R. McGeogh .....	Bay City
J. McLurg .....	Bay City
G. P. McNaughton .....	Standish
G. E. Orth .....	Linwood
F. H. Randall .....	Bay City
R. E. Scrafford .....	Bay City
A. F. Stone .....	Bay City
Albert Stealy .....	E. Tawas
C. M. Swantek .....	Bay City
G. W. Trumble .....	Bay City
V. L. Tupper .....	Bay City
E. C. Warren .....	Bay City
A. J. Zaremba .....	Bay City

## BENZIE.

H. J. Kinne ..... Frankfort  
F. H. Stone ..... Beulah

## BERRIEN.

F. H. Coone ..... St. Joseph  
R. B. Howard ..... Three Oaks  
D. D. J. Hoyr ..... New Troy  
F. N. Martin ..... St. Joseph  
A. A. Rosenberry ..... Benton Harbor  
A. Z. Van Noppen ..... Niles  
E. J. Witt ..... St. Joseph

## CALHOUN.

E. K. Harris ..... Battle Creek  
L. L. Joy ..... Marshall  
H. M. Lowe ..... Battle Creek  
E. J. Pendall ..... Marshall  
F. W. Phillips ..... Battle Creek  
J. L. Ramsdell ..... Albion  
C. R. W. Southwick ..... Olivet  
L. E. Westcott ..... Ceresco

## CASS.

S. L. Loupee ..... Vandalia

## CHEBOYGAN.

A. J. Sahs ..... Cheboygan

## CHIPPEWA.

E. H. Campbell ..... Newberry  
A. McCandlass ..... Sault Ste. Marie

## CLINTON.

Henry Cook ..... Fowler  
M. S. Gregory ..... Eureka  
C. R. Keller ..... Maple Rapids  
E. L. Martin ..... Maple Rapids  
A. M. Switzer ..... Elsie

## DELTA.

Fred Baker ..... No. Escanaba  
G. C. Bartley ..... Escanaba  
O. F. G. Bjorkman ..... Gladstone  
M. P. Fenelon ..... Escanaba  
W. A. Lemire ..... Escanaba  
A. F. Snyder ..... Escanaba  
Louis Treiber ..... Bark River  
E. R. Wescott ..... Spalding

## DICKINSON-IRON.

J. A. Crowell ..... Iron Mountain  
A. M. Darling ..... Crystal Falls  
M. F. Dockery ..... Sagola  
J. O. P. Edwards ..... Alpha  
R. E. Hayes ..... Channing  
C. F. Larson ..... Crystal Falls  
E. M. Libby ..... Iron River  
W. McBurney ..... Stambaugh  
E. B. McDaniel ..... Crystal Falls  
A. A. Metcalf ..... Crystal Falls  
W. S. Stevens ..... Iron River

## EATON.

J. B. Bradley ..... Eaton Rapids  
H. W. Kenfield ..... Mulliken

C. L. McLaughlin ..... Vermontville  
W. H. Rand ..... Charlotte  
J. T. Warford ..... Mulliken  
C. B. Wassan ..... Bellevue

## GENESEE.

M. E. Chandler ..... Flint  
A. B. Clark ..... Swartz Creek  
P. M. Crawford ..... Flint  
A. R. Ingram ..... Fenton  
B. G. McGarry ..... Fenton  
J. W. Parker ..... Grand Blanc  
J. Scheidler ..... Flushing  
J. R. Shank ..... Flint  
J. D. Stuart ..... Flint  
H. R. Thomas ..... Flint

## GOGEBIC.

L. O. Houghton ..... Bessemer

## GRAND TRAVERSE, LELANAU.

G. L. Fenton ..... Kingsley  
F. C. Mayne ..... Traverse City  
W. M. Payne ..... Suttons Bay

## GRATIOT, ISABELLE, CLARE.

J. S. Bender ..... Bannister  
C. E. Burt ..... Ithaca  
C. M. Denny ..... Middleton  
W. M. Drake ..... Breckenridge  
A. T. Gretchell ..... Mt. Pleasant  
D. M. Langan ..... Harrison  
F. C. Sanford ..... Clare  
W. A. Sayers ..... Mt. Pleasant  
J. R. Shaffer ..... Elm Hall  
F. C. Thornburgh ..... Alma

## HILLSDALE.

W. R. Ditmars ..... No. Adams  
H. H. Frazier ..... Hanover  
W. H. Sawyer ..... Hillsdale

## HOUGHTON.

J. C. Abrams ..... Calumet  
R. E. Ames ..... Cincinnati  
G. W. Orr ..... Lake Linden  
C. H. Rodi ..... Calumet  
W. H. Van Slyke ..... Hancock

## HURON.

D. J. Monroe ..... Elkton  
S. Stevens ..... Uby

## IONIA.

J. C. Fleming ..... Pewamo  
O. P. Geib ..... Hubbardston  
H. B. Knapp ..... Ionia  
F. W. Martin ..... Portland

## INGHAM.

C. M. Davis ..... Lansing  
F. H. Harris ..... Lansing  
J. B. Park ..... Okemos  
L. C. Towne ..... Lansing  
L. F. Weaver ..... Lansing



## JACKSON.

Ferdinand Cox ..... Horton  
 H. G. Glover ..... Jackson  
 W. N. Lake ..... Grass Lake  
 E. M. Palmer ..... Brooklyn  
 A. R. Williams ..... Jackson

## KALAMAZOO.

B. T. Butler ..... Kalamazoo  
 F. A. Butterfield ..... Lawrence  
 J. F. Chapin ..... Schoolcraft  
 Milton Chase ..... Otsego  
 L. E. Clark ..... Otsego  
 R. N. Dunnington ..... Hartford  
 A. H. Gifford ..... Alamo  
 A. M. Hutton ..... Oshtemo  
 H. B. Osborn ..... Kalamazoo  
 H. S. Smith ..... Schoolcraft  
 B. H. Southworth ..... Schoolcraft  
 Howard Stuck ..... Allegan

## KENT.

W. S. Bell ..... Grand Rapids  
 H. M. Blackburn ..... Grand Rapids  
 J. E. Bolander ..... Sparta  
 R. C. Breece ..... Ada  
 E. S. Browning ..... Grand Rapids  
 J. Buersma ..... Grand Rapids  
 E. J. Byers ..... Grand Rapids  
 H. W. Dingman ..... Grand Rapids  
 W. J. DuBois ..... Grand Rapids  
 C. H. Fairbanks ..... Grand Rapids  
 F. S. Fannoff ..... Grand Rapids  
 Wm. Fuller ..... Grand Rapids  
 J. A. Heasley ..... Grand Rapids  
 Jas. Henry, Jr. ..... Grand Rapids  
 C. B. Hernam ..... Grand Rapids  
 J. B. Hilliker ..... Grand Rapids  
 C. E. Hooker ..... Grand Rapids  
 W. A. Hyland ..... Grand Rapids  
 R. J. Kirkland ..... Grand Rapids  
 M. A. Leach ..... Grand Rapids  
 A. M. Martin ..... Grand Rapids  
 R. Maurits ..... Grand Rapids  
 P. S. Miller ..... Grand Rapids  
 C. A. Moon ..... Grand Rapids  
 J. R. Rogers ..... Grand Rapids  
 J. W. Shanks ..... Grand Rapids  
 D. S. Sinclair ..... Grand Rapids  
 C. C. Slemons ..... Grand Rapids  
 G. J. Stuart ..... Grand Rapids  
 S. D. Swantek ..... Grand Rapids  
 M. L. Teeple ..... Sand Lake  
 R. T. Urquhart ..... Grand Rapids  
 W. H. Veenboer ..... Grand Rapids

## LAPEER.

J. H. Burley ..... Almont  
 G. W. Jones ..... Imlay City  
 Paul Thompson ..... Lapeer

## LENAWEE

We have received no remittance for Lenawee County for 1917 dues.

## LIVINGSTON.

B. H. Glenn ..... Fowlerville  
 E. B. Pierce ..... Howell  
 J. D. Singer ..... Brighton

## MACOMB.

H. G. Berry ..... Mt. Clemens  
 W. F. Lungerhausen ..... Mt. Clemens  
 C. M. Mann ..... Halfway  
 J. F. O'Keefe ..... Mt. Clemens  
 A. A. Parisot ..... Mt. Clemens  
 J. H. Seaman ..... New Haven  
 A. N. Shotwell ..... Mt. Clemens  
 A. J. Warren ..... Mt. Clemens  
 W. D. Wilson ..... Mt. Clemens  
 V. H. Wolfson ..... Mt. Clemens

## MANISTEE.

S. H. Cornell ..... Copemish

## MARQUETTE-ALGER.

R. S. Buckland ..... Baraga  
 H. M. Cunningham ..... Marquette  
 C. J. Larson ..... Negaunee  
 H. A. Sharpe ..... L'Anse

## MASON.

J. H. Carnelly ..... Ludington  
 I. L. Hunt ..... Scottville  
 E. J. Kirwan ..... Ludington  
 F. McCandless ..... Ludington

## MECOSTA.

R. P. Allen ..... Remus  
 John Snyder ..... Mecosta  
 W. A. Whitney ..... Big Rapids

## MENOMINEE.

B. W. Jones ..... Vulcan  
 L. W. Palmer ..... Hermansville

## MIDLAND.

All paid.

## MONROE.

All paid.

## MONTCALM.

D. K. Black ..... Greenville  
 V. H. Hargrave ..... Carson City

## MUSKEGON-OCEANA.

J. F. Denslow ..... Muskegon

## NEWAYGO.

W. C. Tompsell ..... Hesperia

## OAKLAND.

G. F. Hamlen ..... Rochester  
 B. H. Spencer ..... Rochester

## O.M.C.O.R.O.

J. H. Abblett ..... Fairview

## ONTONAGON.

All paid.

## OSCEOLA, LAKE.

All paid.

OTTAWA.

Jos. DePree .....Zeeland  
P. H. Fisher ..... Hamilton  
J. F. Peppler .....Wyoming Park  
F. D. Smith .....Coopersville  
G. H. Thomas .....Holland  
W. J. Vandenberg .....Holland  
A. Vander Veen .....Grand Haven  
W. S. Walkley .....Grand Haven

PRESQUE ISLE.

L. C. Kent ..... Onaway

SAGINAW.

B. H. Beckwith .....Saginaw  
R. B. Bennett .....Brant  
W. A. DeFoe .....Saginaw  
A. R. Ernst .....Saginaw  
G. H. Ferguson .....Saginaw  
J. J. Fitzgerald .....Saginaw  
R. O. Fuerbringer .....Saginaw  
Arthur Grigg .....Saginaw  
E. M. Ling ..... Merrill  
J. A. McLandress .....St. Charles  
J. W. McMeekin .....Saginaw  
W. L. Miller .....Saginaw  
E. A. Pillsbury .....Frankemuth  
M. D. Ryan .....Saginaw  
T. L. Ryan .....Saginaw  
L. B. Stewart .....Chesaning  
C. S. Watson .....Saginaw  
R. S. Watson .....Saginaw  
T. M. Williamson .....Saginaw  
P. S. Windham .....Saginaw

SANILAC.

J. E. Campbell .....Brown City

SCHOOLCRAFT.

All paid.

SHIAWASSEE.

A. L. Arnold .....Owosso  
H. L. Arnold .....Owosso  
L. M. Cudworth .....Perry  
H. A. Hume .....Owosso  
C. McCormick .....Owosso  
C. B. Porter .....Owosso  
G. A. Sackrider .....Owosso  
Milton Shaw .....Clinton, Ont.  
G. O. Switzer .....Ludington  
F. A. Watts .....Owosso  
H. T. White .....New Lothrop  
P. S. Willson .....Owosso

ST. CLAIR.

C. A. McPherson ..... St. Clair  
E. P. Tibbals .....Port Huron

ST. JOSEPH.

Ray E. Deán .....Three Rivers  
P. L. Hartman .....Colon  
D. M. Kane .....Sturgis  
J. H. Moe .....Sturgis  
F. W. Robinson .....Sturgis

Marden Sabin ..... Centerville  
A. A. Wade .....Howe, Ind.

TRI COUNTY.

R. Brodeur .....Cadillac  
E. S. Niehardt .....So. Boardman

TUSCOLA.

A. E. Copp .....Tuscola  
J. E. Handy ..... Caro  
H. H. King ..... Colling  
I. D. McCoy .....Cass City  
L. M. Ryan ..... Caro  
W. A. Wellemeyers .....Vassar

WASHTENAW.

J. R. Breakey .....Ypsilanti  
H. W. Emerson .....Ann Arbor  
Q. O. Gilbert .....Ann Arbor  
A. W. Hewlett .....Ann Arbor  
W. A. Hoyt .....Ann Arbor  
H. S. Hilbert .....Ann Arbor  
H. H. Johnson .....Ypsilanti  
W. A. Kloppenstein .....Manchester  
F. M. Loomis .....Ann Arbor  
I. D. Loree .....Ann Arbor  
F. F. Pyle .....Milan  
A. S. Warthin .....Ann Arbor  
C. L. Washburne .....Ann Arbor  
J. S. Wendel .....Ann Arbor  
F. N. Wilson .....Ann Arbor

WAYNE.

Jos. Aarons ..... Detroit  
F. B. Allison ..... Detroit  
C. G. Anderson ..... Detroit  
W. R. Baker ..... Detroit  
V. D. Barnes ..... Detroit  
G. C. Bassett ..... Detroit  
R. Beattie ..... Detroit  
W. C. Bell ..... Dearborn  
C. C. Benjamin ..... Detroit  
A. E. Bernstein ..... Detroit  
John Blake ..... Detroit  
A. C. Blakeley ..... Detroit  
T. F. Brady ..... Detroit  
E. L. Brandt ..... Detroit  
J. N. E. Brown ..... Detroit  
A. E. Bryant ..... Detroit  
G. B. Bulson ..... Detroit  
G. Bundy ..... Detroit  
J. E. Burgess ..... Detroit  
F. B. Burke ..... Detroit  
F. E. Callister ..... Detroit  
C. A. Campbell ..... Detroit  
G. C. Caron ..... Detroit  
R. H. Carmichael ..... Detroit  
J. E. Casey ..... Detroit  
D. R. Clark ..... Detroit  
H. R. Call ..... Detroit  
C. C. M. Conley ..... Detroit  
G. L. Connor ..... Detroit  
B. F. Corbett ..... Detroit  
C. G. Crumrine ..... Detroit



R. F. DeBlois .....	Detroit	John Lee .....	Detroit
V. C. Doherty .....	Detroit	C. J. Lehman .....	Detroit
L. J. Dretzka .....	Detroit	R. S. Linn .....	Detroit
M. S. Dubpernell .....	Detroit	J. S. Lipsky .....	Detroit
F. Duffield .....	Detroit	P. J. Livingstone .....	Detroit
S. Duffield .....	Detroit	W. J. Lovering .....	Detroit
G. C. Duggan .....	Detroit	L. W. Lyon .....	Detroit
E. W. Eede .....	Detroit	J. H. McCann .....	Detroit
J. E. Emerson .....	Detroit	T. McClure .....	Detroit
A. Fellman .....	Detroit	F. T. McCormick .....	Detroit
W. A. Fenner .....	Detroit	Grant McDonald .....	Detroit
G. H. Fielder .....	Detroit	G. H. McFall .....	Detroit
L. R. Fitzgerald .....	Detroit	G. H. McMahon .....	Detroit
O. A. Fischer .....	Detroit	A. McMichael .....	Detroit
C. A. Fisher .....	Detroit	W. M. Manton .....	Detroit
N. M. K. Fisk .....	Detroit	A. Metzner .....	Detroit
O. C. Fluemer .....	Detroit	W. E. Miller .....	Detroit
H. E. Fogt .....	Detroit	E. T. Milligan .....	Detroit
L. Galton .....	Detroit	C. G. Morris .....	Detroit
I. S. Gellert .....	Detroit	A. R. Moon .....	Detroit
D. L. Gordon .....	Detroit	C. W. Morey .....	Detroit
A. H. Gorenflo .....	Detroit	P. F. Morse .....	Detroit
F. J. Grandfield .....	Detroit	J. W. Neary .....	Detroit
H. W. Green .....	Detroit	H. E. Northrup .....	Detroit
A. J. Griffith .....	Detroit	R. W. Odell .....	Detroit
W. Gramley .....	Detroit	Burton Ray .....	Detroit
B. J. Hamilton .....	Detroit	T. H. O'Rourke .....	Detroit
R. J. Hamlen .....	Detroit	A. P. Ohlmacher .....	Detroit
G. C. Hardy .....	Detroit	Howard Osborn .....	Detroit
B. D. Harison .....	Detroit	F. R. Ostrander .....	Detroit
A. E. Harris .....	Detroit	E. J. Panzner .....	Detroit
W. M. Harvey .....	Detroit	F. J. Przybylowski .....	Detroit
M. G. Haskins .....	Detroit	M. B. Robinson .....	Detroit
P. F. Hasley .....	Detroit	E. Rodd .....	Detroit
O. H. Heidt .....	Detroit	F. D. Royce .....	Detroit
E. W. Henderson .....	Detroit	W. D. Ryan .....	Detroit
L. T. Henderson .....	Detroit	J. W. Schureman .....	Detroit
Thos. Henderson .....	Detroit	T. Sigel .....	Detroit
W. R. Henderson .....	Detroit	G. K. Sipe .....	Detroit
L. H. Herbert .....	Detroit	Eugene Smith, Sr. ....	Detroit
Max Herrman .....	Detroit	Eugene Smith, Jr. ....	Detroit
C. W. Hitchcock .....	Detroit	A. M. Stirling .....	Detroit
J. J. Howard .....	Detroit	J. D. Stuart .....	Detroit
A. M. Humber .....	Detroit	L. C. Thomas .....	Detroit
W. H. Hutchings .....	Detroit	E. D. Tichnor .....	Detroit
F. W. Hyde .....	Detroit	T. Walker .....	Detroit
Nathan Jenks .....	Detroit	C. E. Watson .....	Detroit
E. B. Keeler .....	Detroit	O. B. Weed .....	Detroit
J. B. Kennedy .....	Detroit	A. B. Wickham .....	Detroit
W. Y. Kennedy .....	Detroit	W. J. Wilson, Sr. ....	Detroit
J. A. Kinzey .....	Detroit	J. A. Winter .....	Detroit
A. W. Kipp .....	Detroit		
M. E. Kohn .....	Detroit		
E. P. Koneczny .....	Detroit		
S. A. Kulick .....	Detroit		
P. A. Klebba .....	Detroit		
W. C. Lambert .....	Detroit		
W. P. Lane .....	Detroit		
O. H. Lau .....	Detroit		
T. M. Lawton .....	Detroit		
M. A. Layton .....	Detroit		
A. C. Lee .....	Detroit		

#### INDIANA GRAFT.

The following needs but little comment. Needless to add that we know Indiana doctors are not of this type:

1801 South Penn St.  
Muncie, Ind.

Mr. C. T., 195 Spring St.,  
Muskegon Mich.

My Dear Mr. T.

Your son Glen, I believe it is, is treating with

me and I find he is suffering from appendicitis due to the pressure against that organ and the bowel of a dislocated kidney, the latter causing appendicitis and prostatic trouble and will soon lead to the development of acute appendicitis and peritonitis, plus bladder and kidney inflammation and a general state of debility and nervous collapse.

I am practicing surgery here, having been forced to leave Cin. on account of my health.

I was the first surgeon to originate a successful operation for dislocated kidney and to investigate its pathological importance and relation to abdominal troubles, etc., etc.

Every surgeon of any prominence in Europe and America is now using my operation, and has recognized my work on the subject as authoritative.

In Cin. I taught anatomy and surgery in five colleges: Two medical, two dental and one for doctors.

I will take the boy in my home and give him the best that a good surgeon and a christian home can offer. It will cost him, operation, hospital attention (my home) nursing and all, between \$100 and \$125, and as I expect to go to a large city in a few weeks 5-7, to take a college position, I would advise action as soon as possible. He has some money, about \$50, I believe, but needs some more, enough to make out the above amount.

Under separate cover I am mailing address delivered years ago on the subject. Please read it and return it as soon as possible, as it is all I have here. The operation was done on me with perfect success and hasn't been changed except a little in one or two details.

I would like to hear from you at your earliest convenience.

Very cordially yours,  
Dr. E. H.,  
1801 South Penn St.  
Muncie, Ind.

### *Correspondence*

Battle Creek, June 13, 1917.

Dr. F. C. Warnshuis, Powers Theater Bldg.,  
Grand Rapids, Michigan.

My dear Dr. Warnshuis:

We have received your circular letter relative to appointing a County Patriotic Committee, and I have the honor to report that the committee for Calhoun County as appointed by the President, who is himself Chairman of the Committee consists of the following members beside the President, Dr. W. L. Godfrey.

Dr. E. L. Parmeter, Albion.

Dr. Chas. E. Stewart, Sanitarium.

Dr. W. H. Haughey, 24 W. Main St.

Dr. R. V. Gallagher, Post Building.

The machinery for collecting the extra \$5.00 assessment is about ready to be set in motion. Already two members have paid their assessment.

We very much desire to know what items are to be included in the assistance to be cared for by the State Society for the benefit of enlisted members. I am asking this as it is very necessary for our Society since we presume to care for certain items for our own members, provided they are not looked after by the State Society. It is our purpose to see that each enlisted man shall have no anxiety regarding the paying of life insurance premium up to \$8,000 per member. That his taxes on \$4,000 of property shall be paid, and that his fire insurance on his property shall be paid. This much aside from being sure that his family suffers no distress during his absence. Of course, his Society dues will be remitted and a plan has already been set in motion whereby a goodly amount of equipment is being paid for.

You understand we do not wish to double up with the State Society and it would seem this should be taken care of by the State Society rather than by the Local Society, and that a sufficient assessment to accomplish this should be levied. We would very much appreciate a promptly reply.

A. F. KINGSLEY, Secretary.

Rudyard, June 11, 1917.

Dr. Warnshuis, Grand Rapids, Mich.

Dear Doctor:

I have passed my examination and have my papers in to Washington for the Medical Officers Reserve Corps.

If I am called upon to go to the war zone or to a training camp, do you know of any physician not of military age whom I could get to take care of my practice while I am away.

I am the only physician here and would not like to leave without making arrangements to have some other physician take over the practice.

Yours very truly,

R. D. SCOTT.

June 15, 1917.

Dr. F. C. Warnshuis, Secretary  
Michigan State Medical Society,  
Grand Rapids, Michigan.

I am in receipt of your letter of June 4th enclosing resolution passed by the Michigan State Medical Society at its meeting on May 10, 1917, and have taken the matter up with Surgeon General Gorgas.

Very truly yours,

FRANKLIN MARTIN,  
Member of The Advisory Commission.



## Deaths

**Dr. James E. Taylor** of Ovid dropped dead as a result of heart trouble, May 13th. He had been suffering for several months from an extreme case of heart trouble but it was hoped that if he was cautious not to overdo, he might recover.

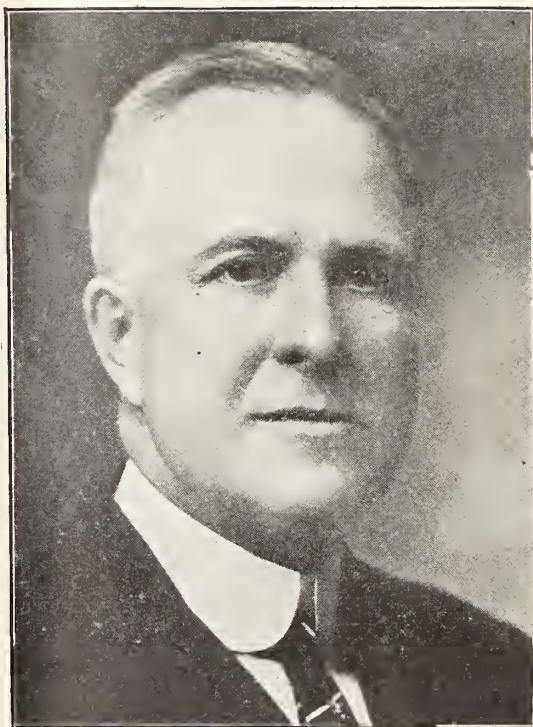
**Dr. J. A. Winter** of Detroit died at his home, June 4, after a lingering illness. Funeral services were held from the Masonic Temple in charge of the Knights Templar.

Following are a number of deaths of doctors not belonging to the State Society. Dr. Samuel Robinson of Sturgis, Dr. J. H. Dobson of Bellaire, Dr. Roy Freeland of Detroit, Dr. Abler of Plymouth, Dr. F. L. Smith of Detroit, and Dr. Frank V. Stutzke of Detroit.

**W. L. Dickinson, A.M., M.D.** It has been our good fortune to know the late Dr. W. L. Dickinson for many years, as but few men knew him. It may be safely said we do not know men until we know them well, as only then do those inborn hidden qualities reveal the truer life of the individual which is not observed as men meet and pass in business affairs. Such associations with the deceased enables us to note the serious loss to the community and the medical profession by his death. He came into manhood among the hills of a New York farm, an event he cherished as his greatest inheritance and to which source may be attributed the foundation of his rugged industrious nature and sturdy honesty. He was a man of splendid scholarship and culture, having obtained his M.A. degree from Taylor University and M.D. from the University of Buffalo. Although devoted to his profession, which he believed transcends the benevolence of all other crafts in the administration of Christian charity, he gave much time in a quiet way to literary and philosophic work, and in his library may be seen the later writings on modern electricity, science and mechanics.

He was a member of the A.M.A., the State Medical Society and the American Proctological Society, a specialty he followed for 25 years, and in

which he gained an enviable reputation. He was formerly president of the Saginaw County Medical Society and for many years president of the Medical Staff of the Women's Hospital. He had profound faith in the honor and fidelity of his confreres in the profession and rarely missed a gathering or meeting in their interests. Of stern will and strong convictions, his manner gave expression of independence and conclusions largely his own, and although charitable, kind and sympathetic to the last degree, he made no compromise to save his



W. L. DICKINSON, A.M., M.D.  
1854-1917.

reputation for consistency or to secure immunity from criticism of his friends. He was inclined to follow the path of duty, rather than what policy dictated, and to subordinate all things to truth and what seemed to him to be right.

It may be reverently stated that our language owes a gratitude for the excellent characteristics that have secured for him a worthy remembrance and immortality in the minds of his associates.

He was a life long member of the Methodist Episcopal Church and of the Knights Templar, under whose auspices funeral services were conducted at his residence in Saginaw, June 10th, and his body returned to his childhood's home in West Webster, New York, for burial, after two score years of honorable activity in his adopted state.

W. F. ENGLISH, M.D.

## State News Notes

The Detroit College of Medicine and Surgery graduated a class of 64 on June 1st. The degrees were conferred by the President. The faculty address was delivered by Dr. Angus McLean and the valedictory by C. G. Woodhull.

MARRIED: Dr. W. T. Dodge of Big Rapids and Miss Mulvey of Alma were united in marriage on June 25th, at Alma. After a short "auto-honeymoon" they will be at home to all the members of the State Society.

Dr. E. E. Hendershot has been appointed health officer of Adrian. He succeeds Dr. H. H. Hammel who has entered training at Fort Benjamin Harrison.

Dr. H. Ostrander of Kalamazoo was elected as one of the councilors of the Medico-Psychological Society of America at its annual meeting in New York.

Please note the advertisement of the Michigan Auto Owners' Association in this issue. We personally recommend this organization.

Dr. F. A. Roberts of Flint has been appointed Captain of the Ambulance Corp that is being recruited by Knight Templars of Michigan.

Dr. C. C. Huber of the U. of M., delivered the annual address before the Alpha Omega Alpha at Minneapolis.

Dr. E. L. Eggelston of Battle Creek delivered the graduating address to the class of the Albion City Hospital.

Dr. Wade Stewart Forth of Manistee and Miss Nan Romans of Portage Lake were married June 16th.

Dr. Warren L. Babcock has been elected President of the Wayne County Society with Dr. Ray C. Andries as Secretary.

County secretaries will please send in the name of the chairman of their Patriotic Committee.

Dr. Chas. Lynch has resigned as Health Officer of Lansing.

Dr. F. C. Theide has been appointed city physician of Monroe.

Dr. G. P. Morison has been appointed pension examiner for St. Joseph county.

Dr. Bellinger of Bath has moved to Lansing.

Dr. W. C. Kools has become associated with Dr. W. G. Winter of Holland.

Dr. G. P. Morison has been appointed Health Officer of Sturgis.

Dr. R. G. Leland, Health Officer of Kalamazoo, has resigned and is now at Fort Benjamin Harrison.

Dr. C. S. Ballard has been elected city physician for Flint.

Dr. A. W. Blain of Detroit announces the limitation of his practice to surgery.

## County Society News

### EATON COUNTY

Third annual meeting of Eaton County Medical Society.

1. "The use of Digitalis," by John G. Gage, Battle Creek. This paper was a very valuable one to the General Practitioner and was appreciated by all present.
2. "Military Surgery," by Leo C. Donnelly, M.D., Detroit.

(Brief of Doctor Donnelly's paper is found below.)

Doctor Donnelly's paper was based upon his experiences at the Orthopedic Hospital No. 43 conducted by R. R. Fitch, ex-Secretary of the American Orthopedic Society. This Base Hospital is situated back of the Somme and is rapidly becoming one of the large orthopedic centers in France.

Doctor Donnelly gave a resume of the Surgical problems that were met with in the War Zone.

The Carrel-Dakin treatment comprising a continuous disinfection of the mechanically cleansed wound tract by a .5 per cent. sodium hypochlorite solution is a gaining support and is becoming the standard treatment in the Allied Hospitals. Many British Hospitals are still using the Wrights' Concentrated Sodium Chlorite solution, salt-wick and salt pack dressing. Ether, iodine, alcohol, eau de taveli, labarraquis solution, etc., are still used according to the ideas of individual surgeons.

All surgeons are attempting early closure of wounds, and many are making bacteriological examination of the wounds, and closing them soon as they are bacteria free. Wounds are closed by secondary sutures or drawn together by means of adhesive strappings or by hooks and laces attached to muslin, the latter is fastened to the edges of the wound by a Gum Arabic preparation.



The French use plaster of paris largely to immobilize their fractures, as the majority of fractures are compound and are infected, large reinforced fenestrated casts are used.

The British are using braces and extension apparatus following the teachings of Robert Jones of Liverpool. Osteomyelitis is a dread complication of compound fractures and it offers the same stubborn problem in the war zone as it does in civil practice. Bone plates are applied even in the presence of pus in order to maintain proper alignment. These wounds are left open and the plate removed as soon as callus forms.

It is the desire of the French Service de Santi that all foreign bodies be removed, since the psychic effect on the patient is bad. American surgeons are loath to remove deeply placed missiles unless they give rise to symptoms.

Antitetanic serum has practically stamped out tetanus. Gas gangrene is less plentiful due to the more prompt and efficient methods of combating sepsis. After it has appeared, very free incision, removal of the pressure and exposure to oxygen seem to be the best measure of combating the infection.

The end results of head, chest and abdominal surgery is very discouraging and the mortality high.

Nerve surgery is still in the experimental stage and as yet the end results are not known.

G. W. BYINGTON, Secretary.

### SANILAC COUNTY

The quarterly meeting of Sanilac County Medical Society was held at Peck on Friday, June 8 at 1:30 p. m. Dr. Neil J. McColl, President of the Society, presiding. The following members were present:

Drs. Neil J. McColl, H. H. Learmont, W. T. Campbell, J. W. Webster, L. E. Coelman, J. G. Waltz, C. G. Robertson, J. W. Scott. Visitors: Drs. J. M. Jones, Bay City; M. Lenehan, Jones Clinic, Bay City; Chester Emmett, Wright, Yale.

The President of the Society called the meeting to order and introduced Dr. Lenehan, who gave a talk on "Prostatectomy," discussion offered by Dr. J. W. Webster, followed by the members of the Society: Dr. J. M. Jones, Bay City, was then introduced and gave a talk on "Diagnosis and Surgical Treatment of Gastric Ulcer." General discussion followed.

The following committees were then appointed:

Committee on Red Cross Medical Work: Drs. L. E. Cochran, James A. Fraser, Edward Meyer, exofficio members of Committee, Drs. Neil J. McColl and J. W. Scott.

County Medical Society Patriotic Committee: Drs. C. G. Robertson, J. T. Waltz, H. H. Learmont.

Moved and supported and carried that our next meeting be held on the Beach at Lexington on July 18 and that the Medical Societies of St. Clair, Lapeer, Huron and Tuscola be invited and that the meeting be of a social as well as medical character. The following members were appointed a committee on arrangements: Drs. N. J. McColl, H. H. Learmont, Jas. A. Fraser. The meeting extended a hearty vote of thanks to Drs. Jones and Lenehan.

On motion the meeting was adjourned.

J. W. SCOTT, Secretary.

### Book Reviews

IMPOTENCY, STERILITY AND ARTIFICIAL IMPREGNATION. Frank P. Davis, Ph.B., M.D. C. V. Mosby & Co., St. Louis, Mo. Cloth, 138 pp.

An excellent guiding discussion of a subject demanding greater professional attention and consideration.

ACUTE POLIOMYELITIS. George Draper, M.D., Associate in Medicine, Columbia University. Foreword by Simon Flexner, M.D. Cloth, 149 pp. Price \$1.50. P. Blakeston's Son & Co.

This is a splendid, instructive discussion of the author's experiences and observation of this disease during the recent New York epidemic. It is a practical guide to the diagnosis, care and specific treatment of the disease. Its appearance at this time is opportune as we know not what the summer has in store. All in all it is an experimental book brought right up to date. We urge its study.

THE INTERNAL SECRETIONS, Their Physiology and Applications to Pathology, by Dr. E. Gley, Professor of Physiology in the College of France, Etc., translated from the French and edited by Dr. M. Fishberg. 12 mo. Cloth, 240 pp. Price (about) \$2.00 net. Paul B. Hoeber, Publisher, 67-69 East 59th Street, New York.

Professod Edward A. Schafer in the preface of his monograph on "Then Endocrine Organs," says:

"For a concise history of the subject as well as a critical examination of the main facts on which the doctrine of internal secretions is based, the small but masterly compendium, by E. Gley cannot be too warmly recommended."

With the subject matter brought up to date, a scholarly translation should at this time be particularly welcome to the English speaking profession.

CANCER, ITS CAUSE AND TREATMENT. By L. Duncan Bulkley, A.M., M.D., Senior Physician to the New York Skin and Cancer Hospital, Etc. 12 mo. Cloth, 250 pp. \$1.50 net. Paul B. Hoeber, Publisher, 67-69 East 59th St., New York.

This book presents the medical aspects of cancer and its control by dietetic and medical treatment, with illustrative cases. While under medical guid-

ance the death rate of tuberculosis has decreased over 25 per cent. since 1900, the death rate of cancer has increased over 25 per cent. during the same period, under surgical care.

The author presents a strong argument, with reasons, for the constitutional origin of cancer and the treatment of its basic cause, while acknowledging that in some instances it may be necessary or best to remove the local lesion, or product of the disease, by surgical means.

#### OPINIONS OF THE PRESS.

"In these days of surgical dominance, when operation is urged for every growth or blemish that one chooses to call precancerous, it requires courage to call for delay, to ask the surgeon to stay the knife and see what nature, aided by rational living, will do to arrest the progress of the disease. Dr. Buckley has this courage, and his courage is based upon experience. The book is well written, extremely interesting and moreover provides food for a great deal of deep thought."—*Medical Record*.

"The millenium, in so far as the cure and prevention of cancer, has come if we all could only attain the results of the writer of the attractive and readable volume under discussion."—*Amer. Jour. Med. Sciences*.

"The author's theory deserves judicial consideration, since it represents a logical and rational contribution to the literature of the subject."—*Boston Med. and Surg. Journal*.

"Dr. Duncan Bulkley will meet with the assent of many of his readers when he observes that from the enormous work which has been done on cancer with the microscope and test tube, it would seem sometimes that research workers have become somewhat myopic, and are still not sufficiently farsighted to recognize the true value of statistical studies and clinical observation."—*British Med. Jour.*

"The book is to be recommended as well and clearly written by one whose opinion bears weight."—*Edinburgh Med. Jour.*

"The book will repay perusal."—*Liverpool Med.-Chir. Jour.*

**BOTANIC DRUGS:** Their Materia Medica, Pharmacology and Therapeutics. By Thomas S. Blair, M.D., Editor Medical Council; Author of "Public Hygiene," "A Practitioner's Handbook of Materia Medica and Therapeutics," and "Pocket Therapeutics;" formerly neurologist to Harrisburg (Pa.) Hospital. Large type, fully indexed, 394 pages. Price, \$2.00. Cincinnati, Therapeutic Digest Pub. Co., 1917.

Fischelis a year ago drew attention to the increasing scarcity of imported medicinal products, and urged the utilization of available native supplies. He made an earnest plea for a larger use of galenicals, especially of indigenous plant origin. Prof. A. Tschirch, of the University of Berne, in a recent address, deprecated the increasing use of the so-called active principles and synthetic medications, and that many physicians have disaccustomed themselves to the use of plant drugs. The wish expressed by him in London in 1909, "Let us go back to drugs," has already met with a larger echo than he dared hope at that time.

Blair has presented in this book in concise form a convincing argument for the restudy and enlarged use of galenicals. He is a trained pharmacologist as well as an active practitioner of medicine. He is thus competent to weigh the evidence presented from the research laboratory and that of the bedside. The author frankly admits he "realizes, the

fact most acutely that it is quite impossible, in our present state of knowledge, to prepare a truly scientific text" on the subject. But this deplorable state is, in a measure, a reproach to modern medicine. Galenicals have been used empirically for over 3,000 years, and their scientific study is a common duty. All of the botanic drugs in common use are described, with critical review of their therapy. The exact dose is given, how best employed and the distinctions in the use of allied drugs are gone into thoroughly. While there is evident a strong note of personal predilection owing to intimate study of various galenicals, the author is fair in giving due credit to the opinions of others. Blair's book is one of the most practical, sensible and dependable yet published on the subject. It has appeared at a very opportune time. It behooves every physician who has the interests of his patient at heart to get a copy, and again become familiar with botanic drugs.

**THE MEDICAL CLINICS OF CHICAGO.** Volume II, Number VI (May, 1917). Octavo of 252 pages, 46 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

**ASTHMA:** Presenting an Exposition of the Nonpassive Expiration Theory. By Orville H. Brown, A.B., M.D., Ph.D., Assistant Professor of Medicine, St. Louis University. Foreword by George Dock, Sc.D., M.D. Thirty-six engravings. Cloth, 330 pp. C. V. Mosby Co., St. Louis Mo.

This monograph is the result of the author's nine years of study of the subject.

With the great range of special investigation in all departments of medicine, and the effort to explain all obscure features by applying new discoveries in every field of science, comes the need of making broad surveys—of gathering in a connected form the present status of various clinical problems.

The conditions included in the term "asthma" might well excite efforts at general study, and Dr. O. H. Brown has earned the gratitude of the profession by presenting a comprehensive and up-to-date study of them. The writer has had the privilege of following Dr. Brown's research over some years and of reading his manuscript, and has been impressed by the accuracy of the author's clinical work, and by the fullness and symmetry of the literary production. The literature, both monographic and special, is well presented, the theories of the disease are clearly set forth and critically discussed. The author's theory of asthma, named by him the "Nonpassive Expiration Theory," is stated clearly and in an admirable spirit. It would be superfluous to give an analysis of this theory here, since the chapter well repays careful study, and bears directly on the author's method of treatment, which is clearly presented and reveals the



well-informed, accurate, and conscientious therapist. The student and the practitioner can find in this book a true picture of the previous speculations and present knowledge of asthma expressed clearly and concisely, a trustworthy guide in the examination and treatment of actual patients, and many suggestions for fresh explorations by the bedside and in the laboratory.

**THE INTERNATIONAL CLINICS—QUARTERLY.** Edited by H. R. M. Landis, M.D., Philadelphia. Volume I. Twenty-seventh Series, 1917. Price, \$2.00. J. B. Lippincott Co., Philadelphia.

This first volume of the 27th series of this splendid "Clinic" maintains and in some respects exceeds the previous excellent standard that has prevailed during the past twenty-six years.

**THE ROENTGEN DIAGNOSIS OF DISEASES OF THE ALIMENTARY CANAL.** By Russell D. Carman, M.D., Head of Section on Roentgenology, Division of Medicine, Mayo Clinic and Albert Miller, M.D., First Assistant in Roentgenology at the Mayo Clinic. Octavo of 558 pages with 504 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.00 net; Half Morocco, \$7.50 net.

This work is one of the most complete and authoritative treatise of the subject. The author's extended and voluminous experience at once commands attention. There is compiled the well established facts of the subjects discussed. The experiences and finds that have been found proven and worth while have been selected and systematically arranged and substantiated by voluminous personal observations. The illustrations are numerous, clear and pictorially emphasize the text.

It may safely be concluded that this volume presents and sums up all that is known and worth while in the diagnosis of diseases of the alimentary canal by means of roentgen ray findings.

**DIAGNOSIS FROM OCULAR SYMPTOMS.** By Matthias Lanckton Foster, M.D., F.A.C.S. Cloth, 470 pp. Rebman Company, New York.

This volume will prove to be of permanent reference value to every practitioner. It is a systematic guide to diagnosis. It takes up the symptoms and physical findings and from them the differentiation is made and the true condition determined. It is actually a clinical presentation and enables the physician to determine the true condition from the clinical findings.

As such the work is of exceptional value to the general practitioner for it enlightens him so that he will be able to recognize the ocular condition that confronts him. We are unfamiliar with any work that possesses so much practical and applicable instruction. It is indeed valuable to the literature.

**THE DIAGNOSIS AND TREATMENT OF ABNORMALITIES OF MYOCARDIAL FUNCTION.** By T. Stuart Hart, A.M., M.D., Assistant Professor of Medicine College of Physicians

and Surgeons, Columbia University. Illustrated, 248 engravings. Cloth, 320 pp. The Rebman Co., New York.

This is an excellent work that approaches the subject from the clinical side and lays stress upon practical important features. Numerous graphic tracings are presented and their discussion enables one to grasp a clear practical viewpoint.

The volume merits one's careful study, for by so doing there will result a better knowledge of altered myocardial function.

**BEST SUGGESTION AND OTHER THERAPEUTIC MEASURES IN NERVOUS AND MENTAL DISEASES.** Francis X. Dercum, A.M., M.D., Ph.D., Professor of Nervous and Mental Diseases, Jefferson Medical College. Second Edition, Cloth, 395 pp. P. Blakeston's Son & Co., Philadelphia.

The author has unfolded in a systematic manner the problems presented by the exercise of function, rest and various fatigue stages. Likewise there is imparted a clear interpretation of the various neuroses. Emphasis has been laid upon physiological methods and the employment of purely medical treatment.

The result is a splendid work on a subject that merits more than a dose of bromide to attain normal restoration. It is indeed a compilation that will enable the practitioner to acquire a better insight in the treatment of nervous and mental diseases that will enable him to institute effective methods of treatment.

**MEDICAL STATE BOARD QUESTIONS AND ANSWERS.** By R. Max Goepp, Professor of Clinical Medicine at the Philadelphia Polyclinic, Assistant Professor of Clinical Medicine, Jefferson Medical College. Fourth Edition, Thoroughly Revised. Octavo Volume of 724 Pages. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$4.25 net.

This book as its title indicates, is offered as a material help to students and practitioners who are preparing for state board examinations. What questions may be propounded in the future, we are not able to state. This book is only able to present the nature of the questions submitted in the past, and their proper answer, which will be very helpful in preparing for what may come up in the future. After the applicant has adequately prepared for examination, he may properly fortify himself by a careful study of what the probable nature of the examination may be. A well qualified candidate may fail by being taken by surprise by his ignorance of the character of the examination to which he may be submitted.

This edition includes the later subjects included in a state board examination, physics, chemistry and bacteriology; and will be particularly helpful to the practitioner who has been out of school a few years and now seeks an opportunity to prepare for a new examination in another state.

*Frostilla.*—The lotion for chapped hands is, according to the *Druggist Circular*, a quince seed mucilage containing alcohol, glycerin and perfume. (*Jour. A.M.A.*, May 5, 1917, p. 1341.)

## Miscellany

### MORTALITY OF MICHIGAN, MAY, 1917.

There were 4,232 deaths reported to the Department of State as having occurred in the State of Michigan during the months of May, 1917. This number corresponds to an annual death rate of 15.8 per 1,000 estimated population. In addition to the above, there were 246 stillbirths returned as deaths.

By ages there were 627 deaths of infants under one year of age; 260 deaths of children aged 1 to 4 years, both inclusive; and 1,338 deaths of elderly persons aged 65 years and over. The number of deaths of elderly persons shows an increase as compared with the preceding month.

Important causes of death were as follows: Pulmonary tuberculosis, 267; other tuberculosis, 62; typhoid fever, 35; diphtheria and croup, 76; scarlet fever, 43; measles, 45; whooping cough, 25; pneumonia, 426; diarrhea, enteritis under two years, 98; meningitis, 47; influenza, 44; cancer, 248; violence, 273.

As compared with the number of deaths for the preceding month an increase is noted in the number of deaths returned from pulmonary tuberculosis, typhoid fever, diphtheria, measles, whooping cough, diarrhea, meningitis, cancer and violence. A slight decrease is noted in the number of deaths returned from other tuberculosis, scarlet fever, pneumonia, and influenza.

In addition to the important causes noted above there were 2 deaths from tetanus, 1 from Anthrax, 1 from chicken pox and 1 from poliomyelitis.

The different State Institutions (Hospitals and Asylums), reported deaths as follows: Traverse City, 29; Kalamazoo, 22; Pontiac, 14; Newberry 5; Soldiers' Home, 16; Wayne County House, 60. The death rates for the above cities shown in the table of cities include all deaths, transient and others. In a majority of instances the transient deaths should not be charged to the particular city in which institution is located. Following are the corrected rates with deaths occurring in institutions, deducted—Traverse City, 11.7; Kalamazoo, 10.0; Lapeer, 7.8; Pontiac, 18.2; Ann Arbor, 20.4.

The distribution of deaths referred to above by counties and by cities as well as by the most important causes of death may be seen in the table shown in the Monthly Bulletin of Vital Statistics, which is published by the Department, and is for free distribution.

Upon referring to the table of counties we find the greatest mortality rate is for the County of Luce. This county shows a rate of 25.6 per 1,000 estimated population. Crawford County with a rate of 44.0 per one thousand estimated population shows the highest birth rate for the month.

There were 6,601 births returned to the Department as having occurred during the month of May. This number corresponds to an annual birth rate of 24.6 per 1,000 estimated population. A decrease of 421 births is noted as compared with the month immediately preceding. In addition to the above there were 271 stillbirths returned as births.

*Nutrolactis and Goat's Rue.*—Drugs which stimulate the secretion of milk are unknown to science. Yet the proprietary Nutrolactis (The Nutrolactis Company) is claimed to increase the milk supply of nursing mothers. Since dependence on a preparation of this kind is liable to cause neglect of the only means of increasing the milk supply of nursing mothers—care of the general health and a sufficient quantity of proper food—Professor A. J. Carlson and Marian Lewis of the Hull Physiologic Laboratory of the University of Chicago studied this proprietary and the drug goat's rue (*Galega officinalis*), which the proprietors of Nutrolactis hint as being the potent constituent to determine their effects on nursing animals with the intention of extending the study to nursing mothers if the animal trials warranted this. The animal experiments showed that neither Nutrolactis nor goat's rue had any effect on the milk supply of nursing goats or dogs. The Council on Pharmacy and Chemistry, which had caused the study to be made, endorsed the work of Carlson and Lewis, and held that the claimed galactagogue effects of Nutrolactis and the drug goat's rue had not been substantiated. (*Jour. A.M.A.*, May 26, 1917, p. 1570.)

*The Luetin Test.*—Confirmatory of previous investigations, H. N. Cole and H. V. Parysek finds that some non-syphilitics respond positively to the luetin test and that in those non-syphilitics who do not respond spontaneously the reaction can generally be provoked by iodides. They also demonstrated that the reaction may be provoked by potassium nitrate and potassium bromide. Proving that the potassium ion in the potassium iodide and bromide was not concerned in the reaction, they found that the luetin test may be provoked by sodium bromide, sodium iodide and calcium bromide (*Jour. A.M.A.*, April 14, 1917, p. 1089).

*Pepsodent.*—Wm. J. Gies writes that Pepsodent is a dentifrice widely advertised as a mucin digestant. In a research conducted for the First District Dental Society of the State of New York, Professor Gies and Miss Franke found that the digestive claims were not warranted in any degree. Gies holds that there is about as much common sense in the proposed use of pepsodent for this purpose as there is in the oral administration of a few grains of lactopeptine to improve impaired tryptic digestion in the intestines (*Jour. A.M.A.*, April 28, 1917, p. 1278).



# The Journal

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### *Original Articles*

#### **DIFFERENTIAL DIAGNOSIS BETWEEN FUNCTIONAL AND ORGANIC CARDIAC MURMURS.\***

**COLLINS H. JOHNSTON, B.A., M.D.**  
GRAND RAPIDS, MICH.

About a month ago a business man in a neighboring city wished to protect his associates by taking out a fifty thousand dollar life insurance policy. He was rejected because the examining physician reported that he had a heart murmur. He applied to another company and was again rejected for the same reason. He then went East to the home office of another company and was rejected for a third time. He then came to Grand Rapids where I examined him for a fourth company and found him to have a functional instead of an organic heart murmur. I therefore recommended his acceptance. Wishing to have the applicant passed upon by two examiners on account of the size of the policy, the company sent him to Chicago where my finding was confirmed. The policy was accordingly issued.

This gentleman's experience is an illustration of what is happening many times a day although the outcome in this particular case was rather an unusual one as most life insurance companies regularly reject all applicants with heart murmurs.

Three years ago I sent a questionnaire to the medical directors of a number of old line companies and received replies from twenty. Half of these said they accepted applicants with heart murmurs, "if functional," and then proceeded to state that owing to the difficulty of making a differential diagnosis between functional and organic murmurs such cases were regularly rejected.

One director said, "I assume that a func-

tional murmur is nearly as rare as a Jew in an Irish graveyard. I do not believe it is possible to differentiate between a functional and an organic heart murmur. Functional murmurs do not exist in life insurance."

Another stated that "the only sure differentiation is made by the subsequent history of the individual. If the murmur disappears permanently then the presumption is that it was a functional murmur. As long as the applicant shows a murmur of any kind we do not consider it's safe to accept him."

Another director wrote. "I believe that from a clinical standpoint it is possible by physical examination to differentiate between a functional and an organic murmur, but for practical life insurance work it is not always wise to do this."

Many a man has left his family penniless, many a promising business career has been sidetracked, many brilliant boys and girls on graduating from high school with high honors have been unable to take advantage of a scholarship that would enable them to go through college, many a young woman has been advised never to marry for fear of being unable to stand the strain of childbirth, many men and women have become confirmed neurasthenics and lived in constant fear of sudden death, many young men anxious to serve their country in one or another branch of the army or navy at a time when they are so much needed have been prevented from doing so and many more will be—all because so many members of the medical profession still cling to the errors and traditions of the past and do not yet appreciate the fact that the great majority of heart murmurs are physiological and normal signs and do not indicate past or present disease of the heart of any kind.

A few years ago in writing to one of my friends in Philadelphia, a most distinguished clinician, I stated that I thought a little exercise or the assumption of one position or another would produce a murmur in the hearts of over half of the people who came to my

\*Read before the American Climatological and Clinical Association at Lakewood, New Jersey, May 30, 1917.

office and that I thought most of such hearts were perfectly normal. He replied that he considered any heart pathologic that presented a murmur under any circumstance. Yet it is necessary to exercise great care in estimating the condition of some of these hearts as was illustrated by a case which has been under my observation the past two years. A man 59 years of age came to me complaining of occasional attacks of slight pain in his stomach which seemed to come on after exercise and to have no relation to his meals. He also admitted being a little short of breath on walking up a hill. He looked well and was very active for a man of his age. His palpable arteries were not hard. He had a soft systolic murmur at the apex. The heart seemed a little enlarged and the second pulmonic sound slightly accentuated. The systolic and diastolic blood pressures were within normal limits, but during the taking of them there was noticed some inequality in the strength of the heart beats or unequal force of the systoles of the left ventricle, although there was no arrhythmia and no inequality of the pulse at the wrist. The diagnosis of myocardial degeneration and the serious prognosis were laughed at by the patient and ridiculed by three or four doctors who saw him later. He made no change in his activities and dropped dead when about to enter his automobile three days before I left home.

Of course there may be times when a prompt and certain diagnosis between functional and organic murmurs cannot be made, but the writer believes that a careful and comprehensive examination will lead to a correct estimate of the condition in the great majority of cases.

All authorities agree that *functional* murmurs are usually *systolic*. Cabot states that the majority of murmurs heard over the heart are unassociated with valvular disease and that 99 per cent. of functional murmurs are systolic, the exception being the very rare diastolic functional murmur which may occur in severe anemia when the hemoglobin is 25 per cent. or less, probably due to stretching of the aortic ring or to sounds produced in the veins of the neck and transmitted to the vena cava.

The first thing to do when confronted with a murmur is to decide whether it is systolic or diastolic. If diastolic, which also includes pre-systolic, the lesion may at once be concluded to be an organic one.

Functional murmurs include anemic, cardio-muscular, cardiorespiratory, accidental and

physiological murmurs. They may be heard in any situation over the heart, but are most frequent in the pulmonary and mitral areas. The vast majority are best heard over the pulmonary area in the second left interspace.

Osler mentions five classes of systolic murmurs in the pulmonary area in which no lesion of the pulmonary valves exists. They are not associated with any evidence of enlargement of the heart nor with accentuation of the pulmonic second sound. The same may be said of all functional murmurs whatever their origin.

Whenever a systolic murmur is heard over the apex, the tendency is to conclude that a mitral insufficiency is present, but Osler states that "a murmur systolic in character, and of maximum intensity at the apex, and propagated even to the axilla, does not necessarily indicate incompetency of the mitral valve. There is heard in this region a large group of what are termed accidental murmurs, the precise nature of which is still doubtful. They are probably formed in the ventricle and are not associated with hypertrophy or accentuation of the pulmonary second sound."

Functional murmurs may be soft or harsh, loud or weak, long or short, and they may be present over any part of the cardiac area. They are usually not loud and are poorly conducted, but some of the loudest and most widely conducted murmurs I have heard were functional. They may vary with the position of the patient and the phase of respiration. In some cases they are present in the upright position and disappear when lying down, in others the murmur appears only when lying down and disappears when standing up or on slight exertion. Cardiorespiratory murmurs are often loudest at the apex, but may be heard as high as the second rib in front, in the axilla, and below the angle of the scapula but as a rule the area over which they are heard is very limited. They are usually louder at the end of deep inspiration and frequently disappear altogether on deep expiration. In still other cases they are persistent under all circumstances.

Organic systolic murmurs occur in mitral and tri-cuspid regurgitation, aortic and pulmonary stenosis. In mitral regurgitation the heart is regularly enlarged, particularly in the transverse diameter, due to hypertrophy of the right and left ventricles. The apex impulse is diffuse and heaving and is displaced to the left and downward, the second pulmonic sound is accentuated. Over the apex is to be heard a systolic murmur which is conducted to the left



and heard in the axilla and below the angle of the scapula. Without these three characteristics, murmur at the apex, enlargement of the heart and accentuation of the pulmonary second sound, a diagnosis of mitral regurgitation is not justified.

In tri-cuspid regurgitation, particularly if large, the right auricle is always dilated. This may be even unaccompanied by a murmur.

Aortic stenosis without regurgitation is extremely rare. Several clinicians of wide experience have told me they have never seen a case. When present it gives rise to a marked hypertrophy of the left ventricle. An aortic systolic murmur is not uncommon, however, in later life as a result of some stiffening or roughening of the cups, unaccompanied by narrowing of the orifice, and the left ventricle is more or less hypertrophied.

Pulmonary stenosis leads to enlargement of the right ventricle, but organic disease of the pulmonary valve is very rare except in congenital heart disease when the disturbance of the circulation is usually considerable and clubbing of the finger tips, cyanosis and other congenital defects often co-exist. The right heart too is generally enlarged.

One of the most important and constant findings in cases of organic murmur is enlargement of the heart. This seems to be more regularly the case with lesions producing systolic murmurs than with those giving rise to diastolic murmurs. But it cannot with accuracy be said that valvular lesions *always* lead to hypertrophy. "It is possible to have a valvular lesion at the aortic or mitral orifice without compensatory hypertrophy, but this is rare." (Councilman. Private Communication.)

Warthin states that "It is however very unusual for a valvular lesion of long standing and aortic or mitral orifice to exist without more or less compensatory hypertrophy. Were it not for the compensatory hypertrophy of the heart walls which usually occurs in these cases, they would seldom terminate in recovery." (Private Communication.)

Practically all authorities agree that pathologic lesions causing organic systolic murmurs regularly lead to enlargement of the chambers or the walls of the heart or both. The exceptions to this rule are so rare as to be almost negligible in practice. Inasmuch therefore as the differential diagnosis between functional and organic murmurs seems to depend so largely upon the recognition of cardiac hypertrophy, let us consider for a few moments what the

clinical signs and symptoms of enlargement of the heart are.

Displacement of the apex beat downward and to the left is an important sign. In healthy adults the apex impulse is usually felt in the fifth interspace immediately inside the nipple, seven to ten cms. from the median line. It may be in the fourth interspace and outside the nipple line in children and some adults. (McKenzie.)

The extent of the impulse varies, ordinarily it covers an area of about two cm. square. Broadening of the impulse is suggestive of dilatation, or hypertrophy and dilatation combined, but a diagnosis of hypertrophy cannot be made from an increase in the area of pulsation alone, as this may be due to extrinsic causes. Nor should a diagnosis be made from displacement of the apex beat alone as this may be due to other causes such as adherent pleura, fibroid tuberculosis, pleural effusions or pneumothorax.

The *only pathognomonic sign* of hypertrophy of the left ventricle as far as the apex is concerned is *increased force* of the apex beat. A large diffuse beat with a forcible, thrusting, heaving impulse and extension of the area of cardiac dullness to the left are characteristic of hypertrophy and dilatation of the left ventricle. The area of visible pulsation is also increased. In nervous people the heart often beats rapidly and with an appearance of increased force, but on putting the hand over the heart it will be found that the beat is light and weak.

In case the apex beat cannot be located with the patient on the back, it is well to look for it with the patient on the left side. In some cases the presence of an apex beat in the sixth interspace can be recognized only with the patient in this position and it may be valuable evidence of enlargement of the heart.

It is usually more difficult to determine enlargement of the right heart than of the left by percussion because the right border is covered more completely by the lung and sternum. Kovaes teaches that when dullness extends one finger's breadth to the right of the sternum, it means dilation of the right ventricle. A heart may be enlarged by hypertrophy of its walls as well as by dilatation of its cavities. We cannot percuss accurately enough to appreciate one to two cms. increase in the size of the heart which is the usually limit of enlargement in hypertrophy alone. Nor do we in postmortems find a greater degree of hypertrophy than this unless it is accompanied by dilatation. (Cabot). Any enlargement of the heart, therefore, which can

be demonstrated by percussion must be due in part to dilatation of its cavities whether there be co-existing increase in the thickness of its walls or not. In the great majority of cases of hypertrophy, from whatever cause, both sides of the heart are affected.

The most common symptoms of organic cardiac disease are undue breathlessness or fatigue or a sense of tightness across the chest on or after exertion, palpitation and precordial distress or pain. The distress may be referred to the epigastrium and such patients may attribute their trouble to the stomach rather than to the heart. Some patients, however, who deny shortness of breath on further questioning will admit their inability to walk rapidly or stand unusual exertion with as much freedom from distressing symptoms as formerly. A tendency towards breathlessness on ascending a flight of stairs or walking up a hill are most important symptoms, but are also common to many affections besides heart disease. Slight pain in the precordium is also a frequent symptom of myocardial weakening but often occurs in functional heart affections and is frequently absent in organic disease. The most characteristic feature of pain due to heart disease is that it is brought on by exertion though it may not appear until some hours later. A little swelling around the shoe tops at night or some swelling of the feet is a not uncommon symptom.

Green has called attention to the astonishing variations in discomfort, pain and hyperesthesia which may result from cardiac disease. Conditions quite remote from the heart itself and attributable to secondary congestions of distant organs such as pain in the lower axilla and shoulders, in the chest wall, in the epigastrium, in the inner aspect of the upper arm and the ulnar surface of the forearm, wrists and fingers may be due to weakening of the myocardium. Many of the above symptoms may pass unnoticed until recalled by questions.

In order to determine whether enlargement of the heart could be eliminated by careful physical examination in cases of heart murmur which I considered to be functional in origin, Dr. Henry Hulst has examined twenty-five men for me in the past two years with the X-ray. Each one had a systolic murmur over the heart and had been rejected by life insurance companies on account of it from one to four times. They were selected from a considerable number of cases of heart murmur coming under observation during this period. Usually it is a simple matter to make the differentiation between functional and organic

murmurs. As most cases of advanced tuberculosis are readily recognized, so are most cases of organic heart murmur, but it is sometimes as difficult to exclude organic disease in a heart as incipient tuberculosis in a lung and only debatable cases were sent to Dr. Hulst.

The following will serve as illustrations:

Mr. E. J. H. Thirty-nine years old. Never been seriously ill. Height 5 feet, 11¾ inches. Weight 150 pounds. Blood pressure 131-80. Force of cardiac impulse normal. Dullness at least one inch within the nipple line. P.m.i. under the fifth rib, 7 cms. from the median line. At the aortic area a soft systolic murmur, taking the place of the first sound. Second sound normal: Pulmonary area same as at aortic: Second pulmonic sound not accentuated: Over the apex a loud systolic murmur with the first sound; conducted downward to the edge of the ribs and audible all over the front of the chest, right and left, in the right axillary region as well as in the left, and below the right scapula as well as the left. The murmur was more distinct at the end of forced expiration, less distinct but still quite audible at the end of deep inspiration. It was heard equally well in the standing, sitting and lying positions. It was the loudest murmur I ever listened to and could be heard with the ear removed an inch or more from the chest wall. X-ray examination showed no hypertrophy of the heart.

Mr. J. M. Aged 25. Never been ill. Has a loud systolic murmur over the pulmonary area which is conducted downward to the mitral area and to the right over the aortic area. No accentuation of the second sounds. The peculiar thing about this case was that while the systolic blood pressure was 120, the diastolic pressure was 0. That is, the fifth auscultatory phase persisted down to zero. A good many clinicians consider this to be pathognomonic of aortic regurgitation, although Norris, Faught, Billings and others have seen it occasionally in exophthalmic goiter and other conditions in which vasomotor tone is greatly reduced.

There was no diastolic murmur over the heart and the man had never had any symptoms of cardiac insufficiency. The X-ray examination showed the outline and size of the heart to be normal.

Dr. Hulst examined all of these twenty-five cases with both the fluoroscope and roentgenograph and in no case was enlargement of the heart discovered. They were all accepted as first class risks for life insurance. For the roentgenographic examination the method of Kreuzfuchs was used which is described in the *Munchener medizinische Wochenschrift* of May 7, 1912, combined with the teleoroentgen method described by Williamson. (*Journ. Med. Sciences*, April, 1915.)

As a general rule broad hearts are found in broad chests and narrow hearts in narrow chests. Short heavy people have relatively broad chests, large hearts and high diaphragms and tall slim people relatively narrow chest and narrow hearts. Kreuzfuchs therefore bases his formula primarily upon the relative length of



the greatest transverse diameter of the heart shadow to the transverse diameter of the thorax. But as the usual manner of taking these pictures gives a considerable degree of distortion and as this false magnification rapidly becomes less with the increase of distance of the tube from the plate, the pictures are taken at a distance of two meters. The rays then become practically parallel and the magnification negligible, amounting to not more than one cm. in each diameter. In order to show the outline of the heart in diastole an exposure of two seconds is made so as to include at least one complete cardiac cycle; and in order that the diaphragm may always be in the same position, the patient is instructed to take a deep breath and hold it.

When the picture is taken the outline of the heart on the right and left sides is marked where it crosses a horizontal line drawn across the thorax through the apex of the cardiophrenic angle on the right side. It will be seen that this line is thus divided into three parts, the width of the heart occupying the central one. Kreuzfuchs states that the proportionate length of the three parts from right to left should be 8-24, 10-24 and 6-24. The part occupied by the heart shadow is 10-24 of the width of the chest.

Numerous examinations of healthy hearts have shown that even when the size and weight and age of the individual are taken into consideration there are still great variations in the average figures. It is stated by some authorities that while it should be possible to detect enlargements of 2 cms. in the traverse diameter, in many cases enlargement of 3 cms. may occur without exceeding the maximum figures. Groedel says the normal heart size is variable and enlargement should be judged not by millimeters but by centimeters.

To allow therefore for normal physiological variations, a heart is considered normal when the shadow does not occupy more than 11 or 12-24 of the entire length of the line. While this formula may not be classed as an absolutely accurate method of determining cardiac hypertrophy it is convenient, readily used and probably more dependable in its results than orthodiagraphy and the tables of Dietlen and Groedel.

Case has used the Kreuzfuchs formula in combination with the orthodiagraph for determining the size of the heart in 30,000 cases in the last five years. He believes that while the figures obtained by this method are not absolutely exact, it is to all intents and purposes

as accurate as the methods of Dietlen and Groedel, the error amounting to less than 1-60, so that for all practical purposes the Kreuzfuchs formula is sufficient and has the further advantage of being simply and quickly used without the aid of any special apparatus. On the whole he has found that the electrocardiographic findings and the Kreuzfuchs formula agree.

The electrocardiograph, however, is probably the most valuable and accurate method of determining cardiac hypertrophy but it is unfortunately not accessible to all clinicians.

Mortenson states that during the last three years he has taken about 1,500 tracings and feels justified in saying that the electrocardiograph practically always shows a left or right hypertrophy when present. He finds that in practically every case in which a left hypertrophy is indicated it can be confirmed by physical examination. He has found that in cases of extensive mitral lesions with physical findings of apparent left hypertrophy, cardiac dullness extending way to the left, the electrocardiograph may show evidence of a right hypertrophy. In such cases a more careful study has made it probably that a mitral stenosis was present as the predominating factor in the mitral lesion causing a preponderance of right ventricular muscle.

A few years ago Lewis of London is said to have made careful dissections of the heart, separating and weighing the muscles of the left and right ventricles, and found that the electrocardiographic evidences of hypertrophy in one side or the other practically always tallied with the autopsy findings.

#### CONCLUSIONS.

1. Functional murmurs are practically always systolic.
2. Diastolic murmurs are probably always pathologic.
3. A systolic murmur *alone* is of no significance and does not indicate valvular disease.
4. The presence or absence of hypertrophy is by far the most important diagnostic factor in differentiating between functional and organic heart murmurs.
5. Absence of symptoms of impairment and a normal cardiac outline on physical and X-ray examination suggest a normal heart.
6. The blood pressure should always be taken.
7. In cases of doubt, the electrocardiograph may give useful information.

## RURAL SURGERY.\*

JAMES A. REEDER, M.D.  
CLARE, MICH.

About one-third of our population reside in proximity to a large hospital; the other two-thirds are farther removed, but are subject to ailments requiring surgical interference similar to those of the urban population. To those of us who practice in these districts where large hospitals are not at our service and which I shall designate rural districts, the question of where to operate is an essential one.

Obviously the only choice is between sending these patients away to some hospital at a distance, or have the work done at or near home. The former has many advantages in certain cases, as well as many disadvantages in others. I shall consider the topic solely from the broad standpoint of the patient's welfare, touching upon the doctor's welfare only as it is incidental to, and co-ordinate with, that of the patient.

Is it better for our rural patients to have rural surgeons equipped to diagnose and perform most of the common major and minor operations at home, or should these be all sent to the big city hospital? While the latter course is advised by the eminent surgeons of the big hospitals, and is largely followed by many other good physicians, I desire to call your attention to some reasons in favor of the former way. As a fundamental basis for comparison, I would say that the same general reasons for sending patients away, apply to surgical, as to medical cases. If all surgical cases should be sent to the hospital for highly specialized treatment, so should all the medical. If we should have no rural surgeons, we should have no medical men there. In other words, if we cannot become equipped and competent to handle the usual major surgical operations at home, we cannot become sufficiently expert to treat the usual major medical cases there, but should send them all away to the specialist. Who will say that either the diagnosis of, or operation for, acute appendicitis, extrauterine pregnancy, or laryngeal stenosis from diphtheria, is more difficult or requires greater skill than does the diagnosis and treatment of Addison's disease, aortic stenosis, or typhoid fever, and who will deny that the prompt action of a competent rural surgeon in the former cases is infinitely better than losing valuable time to take them to the expert at a distance, often over

miles of almost impassable country roads in wild winter weather, to find the patient dead before reaching the hospital. Truly, of the two classes of cases, it would seem that if any cases are to be removed to the hospital, it should be the medical ones, for the urgency of immediate relief is seldom so great as are the surgical ones.

As general practitioners occasionally take an obscure case to the specialist for consultation or treatment, so will the general surgeon in either rural or urban districts refer certain surgical cases to others more especially fitted for that particular case, but it does not seem fair to the average rural surgical patient, nor his physician to send such patient away to a hospital, any more than it would be fair to send all patients suffering with parotitis, hordeolum, or enuresis, to the large hospital for specialized treatment.

Let physicians act consistently; if none but minor surgical cases that any good old grandmother can treat, are to be treated at the rural home, then the same reasons should impel doctors to treat none but the minor medical cases there—send all the others to the highly specialized physicians in connection with the highly specialized hospitals with their very highly specialized equipment. In short, let us degenerate to become a mere medical directory, telling patients which place to go, or better still, let us leave all the two-thirds of humanity to the good old grandmothers, Christian Science and chiropractors, and let us move to the vicinity of the big hospitals and assume the eminent specialist business ourselves.

Ours should be an honorable profession, and we should avoid all shams. We were graduated as physicians and surgeons, and we all still bear that title. The ancient barbers did minor surgery, but did not call themselves surgeons. If we do not think we are reasonably well fitted for the surgical end of the work, but prefer to send it all away, would it not be fair for us to show as much honor as did the ancient barbers—omit the "surgeon" part of our title and call ourselves physicians, and surgical directors to hospitals?

Then, conscientiously believing as a logical sequence that we are not able to handle even the medical cases as well as the eminent specialists do in the large hospitals, we would be in honor bound to drop also the first part of our title, physician, and call ourselves medical and surgical imitations of doctors, or "frauds" able only to direct the sick and the afflicted to some one else who knows something, or to some one

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else who will divide his fees with us—on the “sly” of course. Surely Christian Science, chiropractors, Mayr’s Wonderful Stomach Remedy, Castoria, Tanlac and Mother’s Friend are providing the medical field with humbugs sufficiently gigantic for the great American people without our help—let us be on the square.

I do not contend that all physicians away from hospitals should do major surgery, any more than they should all fit spectacles or make X-ray examinations, but I do contend that every rural community deserves and should support one or more surgeons competent to do the usual major operations. The advantages are many. The cost is less, and need not all be paid in cash as when taken among strangers where the high cost of living—and dying—is much greater. The patient is less nervous in the tranquility of home and friends, than if surrounded by half a thousand students at the big university hospital, the home being more conducive to comfort and recovery. Loving relatives and friends, instead of paid servants are at hand at no expense, to cheer and soothe the patient—a large airy room on the ground floor, in the pleasantest spot in the house that could not be obtained at any cost in a hospital, is hers for nothing. Quietness if she wants quietness, fun if she wants it, sunshine and home—all hers, and when she eats, she gets the eggs and butter fresh from nature’s storehouse, instead of Armour’s, without the accompaniment of hysterical men or too talkative ladies in near apartments, dead patients being wheeled by her door and she wondering when her turn comes to take the same ride—nurses neglectful, forgetful internes, etc.

It is claimed that the rural room cannot be properly sterilized but it should be remembered that the average room never having had any serious infection therein before, is a much safer place than is the average hospital where hundreds of various infections are constantly present notwithstanding the white walls, and the white gowns of the nurses. In short, the color of the room is not the sole index to its sterility, as the percentage of recoveries from any of the usual major operations in a farm house compares most favorably with those in the big hospitals, not assuming that the rural surgeon is so much better than the eminent surgeon in the hospital, but because he gets the cases so much earlier, and they are not killed in moving. It is not the operation that kills, but the disease that makes the operation necessary.

It is also claimed that you cannot have things to work with at the home, but the competent

surgeon will have all things needed in each particular case—he will take his sterilized dressings, ligatures, etc., in their sealed containers, oxygen, pulmotors, or other appliances, also a trained nurse who does not have too many other cases, but gives her best attention in an atmosphere of apple blossoms or new mown hay, filled with the music of nature’s orchestra.

It is the policy of the American College of Surgeons as announced by its first president, Dr. J. M. T. Finney, to discourage surgical work except in the largest hospitals and by the greatest surgeons, but the common doctors are told they should handle the emergency cases “as best they can;” but how can we be consistently expected to do this emergency work if we are not considered fit to do the much easier major work not in the emergency class, and where we have plenty of time to properly prepare everything, and even look up any points desired? If a doctor can do a hurried and successful Cesarean section or a tracheotomy in the excitement and hustle of impending or apparent death, or abdominal section for intestinal perforation, etc., in an old log house with cracks in the floor large enough for mice to enter, is this doctor not to be trusted with the easier work of clean operations for gall bladder drainage, appendectomy, herniotomy, hysterectomy, etc., where he can select the time, place, materials, instruments, nurses, assistants, etc.? Further, if we are not recognized as competent in the latter class of cases, who of us would care to face the responsibility, *as an incompetent*, in those emergencies, where conditions are necessarily worse, where we are supposed to believe in our incompetency, where results are almost sure to be worse, and where our failures work so much injustice to us, being right at home where the added enchantment of distance is unknown?

In all fairness to our patients and to us, if we are required to do all this hard emergency work, (and nerve racking when not used to it, as many of you who have met such emergency will vouch for) and if in so doing we run the inevitable risk to our professional reputations, should we not do the other major work where results are so much better? Is it not a fact that practically all doctors who do only emergency surgery, either do no major surgery at all, or else are very incompetent when the emergency arises, and the patient does not receive the benefit of a skilful operation to which he is entitled; and *why* should a doctor fit himself for surgery if never to use it? As well expect the oculist to know the morphology of

the blood in pernicious anemia, or that eminent neurologic expert in the Thaw case to have even a hazy idea of the course of the pneumogastric nerve, whether it comes directly from the skull or from the spinal cord.

Also, it is a recognized fact that the physician who does no surgery is not usually so competent to diagnose surgical conditions as is the one who operates enough to have "inside information," hence very many surgical cases are being mistreated by medicine. Every surgeon knows of many such, resulting in death of the patient because of want of surgical aid. Personally I recall many such mistakes by physicians who are considered very careful, not to mention the innumerable ones by the average practitioner, and others. How frequently has the chronic obliterative appendicitis or the cholangitis case been mistreated for years by as many as a score of doctors for "stomach trouble," liver trouble," "rheumatism," "nerves" and about every available guess, without any one of them ever having mentioned or suspected the true cause of the trouble? In several of my most plainly marked appendicitis cases, even after a surgeon had properly diagnosed the case, some medical man would deny that there was appendicitis there, but the patient had "just caught cold, and it settled there," and this by doctors who enjoy a high degree of public patronage, even to being elected to our state Senate.

To make matters worse, the public is not always able to tell the difference between a good surgeon and a very poor doctor. They all bear the same title, "Physician and Surgeon," which is sanctioned by law and therefore must be correct. The blatant pretensions of the ignorant doctor are believed by the people in direct proportion to the extent of their own ignorance, hence the most ignorant in medical and surgical matters are led to take the opinion of the ignorant doctor in preference to that of the surgeon, and are naturally delighted to find a doctor who promises a cure by a little dope when some one else wanted to have them "butchered," as they are pleased to call it—for "just a little cold, and it settled there."

If the patient has good luck and recovers for a time, as some undoubtedly will, not by, but in spite of, the medical dope received, the dope doctor gets the credit, also the cash, while the surgeon gets H——, (brimstone). However, if he dies, said dope doctor just says "Well, I did my best, but his heart gave out. No doctor can be expected to save all his patients, I should have had him a day earlier, the Lord giveth and the Lord taketh away." He should have

added, "He died with the best medical help."

This is not meant as an insinuation against the great mass of our educated rural physicians, whom I believe to be more competent than many of their brethren in the largest cities, but this is given only to illustrate the greater need of rural surgeons to help educate the public on surgical matters.

Now, in the interests of such patients as these neglected ones, and others, is it better to tell the rural surgeon to go seek the medical cases, and leave the surgical ones to take their chances of being discovered sometime, then sent, often too late, to the free clinics, this being where most are going, for student practice as on paupers, or should we encourage the rural surgeon to prepare himself for such work, and spread the gospel of surgery till all these neglected cases are saved?

Some eminent surgeons say that it is wrong for us to operate in the homes under such conditions as we find there, but it should not be forgotten that these same eminent surgeons do not fail to accommodate us, at \$300.00 per accommodation, when we send for them to operate under exactly the same conditions, except that some of them, contrary to ethics, divide their fee with the doctor who called them, then they go away and leave all the important after care to be done by the local doctor who has not the ability or assurance to amputate a finger or do an adenectomy; and these cases are practically never emergency cases, these latter dying before the foreign surgeon can get there.

Our rural people, comprising this great two thirds of our country's population, demand and will get modern conveniences. As rural telephones, rural delivery and rural electricity have come to give them the joys and conveniences of the large city without its unfavorable features, so they demand that we fortify ourselves by surgical preparedness to safeguard and protect their lives by giving them adequate and efficient rural surgery.

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## PARAFFINE TREATMENT OF BURNS.

O. H. Cox, M.D.

SAULT STE. MARIE, MICH.

The object of writing this tract is to sum up in a conversational way the work and results we have accomplished by the use of the paraffine treatment of burns. Much has been written on this subject from an experimental point of view. We want to add our few items.

On February 10th, a man was burned by the



explosion of a gallon can of coal oil with which he was dousing a smouldering coal fire. Being in his underclothes, these aided the flaming oil to burn him to a crisp by the time he had fought his way through a window and out into the snow and freezing cold.

First dressings were of pierie acid, both 1 per cent. solution and ointment. Then phenol ointment was used for a few days and followed this with wet dressings both of hypertonic and normal saline solutions with sodium bicarbonate. All had obvious disadvantages of irritation, soiling, and difficulty to maintain adequately. Patient was a large able-bodied workman. Shock and physical distress was great. Frequent vomiting continued for three days. This was combated with large doses of alkali by protoelysis and by mouth.

Burns were of every degree to deep third. They covered both hands, both palmar and dorsal, to above wrists. Both feet were involved to above malleoli. The trunk around to the mid-axillary line was so deeply burned that all the skin later sloughed off and this extended down the thighs nearly to the knees and included the penis and serotum. The neck and face were included up to the nose. In fact, the whole anterior half of the skin surface from the knees up came away, as well as that of the hands and feet.

Treatment was begun as described. It did not seem entirely satisfactory. One thing in favor of the patient was his robust constitution and the fact that he early regained a large appetite and bowel action was free. Despite this, his fever ranged from 100 to 104° F. Pain was constant and when dressings were torn away almost unbearable. The daily shock and intervals of dread proved too much, and emaciation, despite high feeding, became extreme. We had read of "Ambrine" some time previous as written up exploitingly in the lay press, the report purporting to come from French war hospitals. Much was our satisfaction to find an article by Lt. Col. Hull of the R. A. M. C. in the *Journal of the A.M.A.* stating that he had used a paraffine formula of his own, superior to the patented "seeret" product which cost \$5 a pound, and has proved to be practically all paraffine with a little asphalt, flavored c oil of sesame. Direetions for making and applying were so simple that we immediately made up a supply and began its use on Mareh 1st, i. e., eighteen days after the accident. The freedom from pain was remarkable. Dressings were not distressing, and the skin began to grow in from the edges with remarkable rapidity.

Naturally, there was some secretion containing low-grade cocci. About every second day, a new dressing was applied. Interesting to note were the drops of clear serum which would exude thickly over the flat firm granulation areas after these had been wiped clean and dry by cotton sponges. I always referred to this as "Nature's healing balm." The brush had to be applied quickly as the serum was mopped up. The feet and hands healed very early *without scarring*, though the new skin is not normal in appearance yet. The skin on the trunk, considering the area destroyed, has made rapid progress, growing from around the umbilicus, pubis, and a few small scattered islands, all to coalesce with the new growth from the edges.

As a contrast to this case, there came in only recently a burn of the skin of the abdomen over the left hypogastrie region about six by eight inches, produced by a hot water bottle having been left on an uneonseious man.

Large blebs covered this area. "Ambrine" was applied and the pain ceased. Two days later, the temperature shot up, the cause being sloughing of the *whole injured skin area*. Dakin's solution was used to stop any bacterial action and remove the odor. The whole skin now came away in one large necrotic sheet and fresh granulations were established over the subcutaneous tissue. "Ambrine" has been used since and the inward growth of skin is very gratifying to patient and surgeon.<sup>1</sup> July 10th grafts growing freely.

This case was handled by the use of two of the newest, most recently accepted methods developed by reparative surgery. Results have been even as good as those claimed by the manufacturers of proprietary products, which are usually optimistic if not exuberant. The difference in cost is worth mentioning. Various kinds of the paraffine preparations are being sold at \$1.00 to \$1.50 a pound. With paraffine not more than fifteen cents a pound, the following preparation need not cost more than twenty cents a pound, and if made in large quantities, the cost is even less:

℞		
Paraffine .....	65	parts
Petrolatum (Yellow or White) .....	30	parts
Resorcin .....	1	part
or		
B-Naphthol .....	0.25	part
Oil of Eucalyptus .....	2	part
or		
Balsam of Fir .....	1	part

1. Grafts placed on June 15th but still too early to more than surmise the reaction when "Ambrine" used to cover.

Melt the paraffine and petrolatum together. Dissolve the resorcin or B-naphthol in absolute alcohol and add to the hot melted oil, and when cooling add the oil of eucalyptus or balsam of fir. To apply, use a small varnish brush, which costs about fifteen cents. Keep this in a tall glass partly filled with alcohol. While on this subject of costs, you can look up how to make the Dakin-Carrel neutral hypochlorite solution as given in the standard articles in recent medical journals and you will be surprised to find how inexpensive it is.

We might add that certain industrial surgeons who have large groups of men committed to their care that are subject to burns of all sizes and degrees, are finding these preparations such an improvement over the older methods that they wonder how they ever got along in the old manner.

#### CARREL-DAKIN METHOD OF TREATING WOUNDS.

The purpose of reporting these few cases is, in a small way to add to the growing literature on the new treatment of wounds by the Carrel-Dakin method.

We can read extended treatises and arguments for and against the method, but it is our purpose to try and add favorable comment and not destructive criticism.

One case in particular was in every way quite comparable to what we judge would be an average moderately severe casualty of modern warfare.

The morning of May 16th, 1917, occurred a severe explosion of unrecognized dangerous detonation caps which were being unloaded from a garbage wagon on a waterfront pier. Five men in the immediate vicinity were killed and three injured, and a team of horses mangled. This might compare to a gun's crew. The subject of this discussion was not more than fifteen feet from the site of explosion walking towards it close to and directly behind a shipmate. The latter was frightfully mutilated beyond recognition and the fragments thrown many yards into the river. The patient thus had much of the force broken, and though he was thrown under some planking was able to crawl out as help arrived.

Those rendering first aid say that his clothes were blown practically all off him, his watch was smashed, and he was plastered with blood and flesh from head to feet. This proved to be mostly that of his mate, from the waist up. The general clinical picture was one of extreme shock for forty-eight hours, along with the irrationality and prostration of moderately severe concussion.

Three large wounds were found and many smaller ones; two in the right leg, one in the upper femoral region just below the middle of Pouparts fold, and the other over the head of the fibula exposing the underlying tissues over an area of two inches in diameter and extending downward between planes of muscle. The larger wound in the left leg was on the inner aspect of the mid-thigh and would nicely hold a golf ball. The other injuries were not deep, but covered practically all the skin of both legs anteriorly. Dirt, glass, splinters, small pieces of bone and other debris found on a garbage dump heap were driven in and imbedded even against the bone over the tibial crests.

First aid consisted of morphia. And from the wounds were extracted the above mentioned foreign bodies and human flesh. All were swabbed out with Tr. iodine and sterile cotton applied.

About seven hours after injury the use of Dakin's solution was begun. Light packs of gauze were laid in the deeper wounds and the entire injured surfaces covered with layers of gauze and kept saturated with the solution. Thick dry pads were placed over this to prevent too rapid evaporation. Fifteen hundred units tetanus antitoxin were given *intravenously*.

The point we want to emphasize is that there was never any sign of infection. Temperature never went above 99° F. and though the larger wounds exuded a sero-sanguinous fluid for several days, it had no odor of real pus and the few bacteria found under the microscope were non-descript cocci and soon disappeared. The red granulations always spoken of early put in an appearance and healing went on as rapidly as in a freshly incised wound.

The physical condition was very poor for some time. Pressure necrosis on back, heels, and other points, began to threaten almost over night, showing to what a low degree the vitality had been forced.

We feel confident that had any toxemia of infection been added to the general devitalized condition that a fatal termination would have taken place.

A second case was injured in an industrial plant. Manner of injury was by the foot being dragged along a steel rail in front of a ear wheel, the man hopping on the other leg to prevent the wheel passing over. There was a deep compound fracture of the great toe, and dirt was ground deeply into the tissues. Of course, the metatarsal-phalangeal joint was badly traumatized. Dakin's solution was used immediate-



ly through a perforated tube laid in the wound, and no sign of infection appeared, though dirt continued to stain the dressings for many days. The interesting observation was made that the skin on the dorsum of the foot became very irritated before the surgeon remembered that vaseline should be applied.

The attending surgeon states that he has had many similar cases from the same plant. None of them have made such a satisfactory progress as this one. All, despite continuous irrigations of all kinds of usual antiseptics, would slough and discharge, typical of the "laudable pus" days.

Other less serious or less successful cases could be cited from our small experience. And it has been our findings that if the solution reaches *all parts*, the infection will not appear, or will disappear promptly. For instance, a thecal infection did not become better with a wet dressing to the hand, though drainage was established by a small opening, until the part was laid open and all parts frequently subjected to the chlorine action.

A compound fracture of the thumb came in from a lumber camp several days after injury. A filthy rag inadequately covering the wound had been applied. Sepsis, as signified by local heat, color, odor, and discharge, was setting in. It promptly cleared when the neutral hypochlorite solution was made to penetrate to all recesses every two hours.

Nearly a year and a half ago, when the author was serving in the Marine Hospital, Chelsea, Mass., a compound fracture of the first metacarpal came in. The patient, a Greek laborer on an Army dredge, had had the thumb literally sheared off in some pumping machinery. The small strip of tissue unsevered contained the princeps pollicis artery, and so by intravenous anesthesia the thumb was sewed back on and through and through drainage established. At that time, we had only the form of Dakin's solution made up with boric acid. The part never became infected, though the tissues were evidently browned and devitalized by the free alkali.

A good functional result was secured. The last anecdote is to illustrate the improvements possible in a short time from both a chemical and clinical point of view.

We respect the man who makes two blades of grass grow where only one grew before.

Let us accordingly honor the men who have taught us how to prevent all germs from growing where billions flourished in times gone by.

## BRAIN LESIONS—CASE REPORTS.

L. P. PARKHURST, M.D.

GRAND RAPIDS, MICH.

I believe a retrospective consideration of a few cases of brain lesion that I have cared for may be of some value to the general practitioners, the occasional operator and the surgical specialist.

I will refrain from going into lengthy details in any of the cases; neither will I impose on your valuable time by giving book reviews or a commentary on the writings of others. These you can read up at home, if you care to.

I approach this subject without trepidation because I realize that we are all deplorably deficient in our knowledge of brain lesions, whether we are frank enough to admit it or not. Abdominal surgery, plastic, orthopedic, eye, ear, nose, throat and general surgery—all these other branches have attained such a high degree of perfection, it seems a pity so few have made themselves at all conversant with this undeveloped, highly important, wonderful field of study. If reporting these cases will be of any help in the study I shall be very glad.

CASE 1. McConnell boy, age 10, frontal bone, just above both eyes kicked in by horse. Profuse hemorrhage and loss of half ounce of brain substance. Wound cleaned, loose pieces of bone picked out, decompressed pieces pried up or clipped off and removed, wound closed with silk after controlling hemorrhage as well as possible, wound covered with gauze, pad held in place by a roller bandage. Uneventful recovery. Primary union.

CASE 2. Allen boy, age 12. Right half of frontal bone and part of temporal kicked in by horse. Profuse hemorrhage, considerable brain (about an ounce) oozed out, wound cleared of manure and sand, then cleaned up, bone pieces pried up in place, loose spicula removed, depressed edges cut smooth, hemorrhage controlled as well as possible, wound closed with silk, light sterilized dressing, primary union. Uneventful recovery. To excuse the horse would say, while in his stall boy came up behind him and struck his legs with a bridle.

CASE 3. Chas. Johnson, Swede, age 25, farmer. While sitting on side of bridge fishing was struck across top of head by a powerful Bohemian, with the edge of an ash fence board. Edge of board crashed through both parietal bones, breaking in a strip about six inches long—a little more than an inch wide and depressed one and one-half inches at center. The Swede fell into the water, but was quickly fished out by passers-by and rushed to my office.

Shaved and cleaned up field, dissected back flap, to expose fracture entire length, lifted up compressed strip after cutting one edge back a little, closed periosteum with fine cat gut, sutured skin with silk, applied simple, light dressing and wound closed by primary union, uneventful recovery. The

Bohemian was tried twice in this county for damages, but recovery was so complete Chas. failed to recover.

CASE 4. Mrs. G. Willard, farmer's wife, injured in runaway. Thrown out violently striking on head and face on stone pile. Right supraorbital fracture of frontal bone, superior-maxillary broken loose from all its bony attachments; to floor of skull, to nasal and facial bones and it was fractured antero-posteriorly through middle. Wired superior maxillary together. Lifted nasal bones to place and retained them by a hard roll of gauze bandage in either nostril and two needles run through under base. Wound silk thread from one end of needles over nose to other end, to help retain things in place. Used lower jaw as splint to lift up and retain superior-maxillary in place. Placed a retaining suture in periosteum of either end of facial bones. A few pads held in place with adhesive, a light sterile dressing was finished. An upper and lower cuspid being out gave room for tube through which she was fed. Very good recovery with but slight deformity. Right eye-ball was a little lower in face than left, on account of her letting an arm fall on that side of face pressing down lower orbit at a moment when nurse was off her guard. Tried to have her watched closely to guard against just such accidents. Aside from the right eye being a little low, her recovery was all that could be desired. Digressing would say she lived twenty years after and died from exposure, many rods from home, poorly clad, in a blizzard, where she had fallen, unable to find her way back to house.

CASE 5. Gould Liebler, laborer, age 30, fell or was thrown from porch platform onto head in cobblestone gutter, December 13, 1911, at Caledonia. Was called by local doctor to satisfy family—doctor thinking case hopeless and saying he would be dead before I could get there. Found him with a pulse rate of 20, respiration 4, just an occasional gasp. Left fronto, temporal region crushed in. Round depression about three inches in diameter where he struck on stone as blood stains in gutter showed. After hastily cleaning up region of injury, laid flap down to expose fracture, picked out the pieces that were driven into brain, trimmed edges of bone depressed, but not detached, scooped out the blood clots—some of them being fingers length down under the brain. Closed the dura with 00 chromic cat gut, skin was sutured with silk worm gut. When last two sutures were inserted patient moved an arm and leg. Light sterile pad held in place by a roller bandage completed the dressing. By time dressing was completed respiration and pulse were normal. Wound closed by primary union. Uneventful recovery.

Three months later began working for G. R. & I. in freight office and later transferred to passenger gate tender, which position he still holds—six years later.

These five cases were operated without anesthesia of any kind other than the profound coma produced by the injuries. I think in every case a little ether would have taken away their only chance of recovery.

These cases may serve to illustrate the justice in making a prompt effort to save what may appear

to be a hopeless case. You lose nothing and will sometimes be rewarded by recovery.

Have so far only reported cases that recovered. I think we can often learn as much by discussing our failures as by reporting our successes. I will, therefore, now report some of my fatal cases for the sole purpose of bringing out a discussion and if possible some suggestions whereby we might have done better in an effort to help these unfortunate individuals. The above cases were fractures of top, front or side of skull. All had profuse hemorrhage and several lost considerable brain substance. First of this fatal group:

CASE 6. E. Gibbs, age 40, traveling salesman, year 1887. Had we possessed then even the little knowledge of brain surgery we do at present time, I think we should have made a decompression and in all probability saved the patient.

Patient fell down stairs on head in hotel at Caledonia while intoxicated. Lay in hotel unconscious for three days, then began to brighten and in ten days resumed his occupation, apparently well. In four weeks had to give up and return home. Would try to walk straight, but would walk to right and off the side walk every few rods, then come to left or inside of walk, and would try to stay there, but would soon step off right side again in spite of his efforts. Arriving home, he sent for his old family physician who treated him for about six weeks. Grew weaker, soon confined to bed, partly lost use of right arm and leg, became idiotic with spells of mild delirium. At this time I was called to take charge of the case. My treatment was supportive and expectant and he died in two weeks. No autopsy. There was no fracture or depression to be found, evidently case was concussion with intra cranial hemorrhage at left motor centre. We had ample time to make a decompression, though, at time I was called his condition was bad. He was anemic poorly nourished and weak and I doubt if he would have stood the profuse hemorrhage that would have occurred had a decompression been resorted to. Possibly early operation might have been successful.

CASE 7. George Wilson, farmer of Yankee Springs, kicked in back of head by horse, comminuted fracture of occiput. Carried on cot in buggy seven miles to Middleville and shipped here in baggage car, removed to hospital in ambulance. Much blood flowed from ears; was in dying condition when admitted, and succumbed in short time. No regrets in this case, as I think nothing could have saved him at time he arrived.

CASE 8. Mrs. Miller, knocked down on Monroe avenue by an automobile, fracture across base of skull, considerable bleeding from both ears. Rushed to hospital and died in forty minutes. Treatment expectant.

CASE 9. Mrs. Postema, buggy struck by fast M. C. R. R. train, carried some distance on pilot, taken off and rushed to hospital, profuse bleeding from ears. Pulse not perceptible at wrists. Saline transfusion, strychnia hypodermically. Rallied slightly, skull fractured at base. Trephined in hope of relieving intra cranial pressure. Died in less than hour after admission.

CASE 10. Chamber maid at Crathmore Hotel,



dove down three stories through light well—skull crushed like an egg shell. No attempt at treatment, died in thirty minutes.

CASE 11. Mr. Michele, farmer, thrown violently on head in cobble stone gutter by runaway horse. Whole top of head crushed in, median vessels cut by sharp bone edge. Laid flap back when half pint of brain substance pushed out, followed by torrents of blood. Bled to death before much could be done toward controlling the hemorrhage.

CASES 12 and 13. Mr. Carl and Mr. Wilcox, I might refer to as some of you possibly saw them. They both went the rounds from doctor to doctor until finally death relieved them and a diagnosis was made in each case at the autopsy. Both died of brain tumor. Wilcox was sick about a year and Carl over two years. Headache and delirium were only symptoms complained of or noticed.

I would like now to report two more of the curable type of cases.

CASE 14. C. E. Taylor, California school teacher. Complaint, subjective symptoms. Clumsiness and weakness of left foot, hand and arm. Jerking of left arm and hand followed by headache, nausea and vomiting.

*Family History.*—Negative.

*Patient's History.*—Negative, except for injury to head by being thrown from horse many years ago. This was followed by no serious symptoms.

*Present Illness.*—In June, 1915 began to notice jerking of left hand and arm, accompanied by headache, nausea, vomiting followed by numbness and gradual increasing weakness of left leg, foot, arm and hand.

Early in February entered Peter Bent Brigham hospital, Boston.

*Physical Examination.*—Negative except weakness of left arm and leg and malnutrition.

*Neurological Examination.*—Weakness left arm, leg and face, possibly very little hyperesthesia of left side. Exaggerated deep reflexes—left side. Corneal reflexes active—both sides. No choked discs, Babinski positive left, ankle clonus left.

X-ray showed no signs of intra-cranial trouble. Wassermann reaction negative.

*Diagnosis.*—Right para-central, pre-central tumor, at edge of R. hemisphere.

*Operation.*—February 19, 1916, by Dr. Cushing. Enucleation of Parasagittal Endithelioma. Good operative recovery. Paralysis of left side improved, left hospital 30 days after operation, walked about for week before leaving hospital.

*Post-operative.*—On August 12 began having convulsion starting in left hand and arm. From August 12 to December 19, had ten Jacksonian convulsions averaging one once in thirteen days. On January 2, 1917, resumed his school room work. Thinks he is gaining in strength, though leg and arm are still clumsy. Was asked in to talk with this case and encourage him in submitting to an operation. Am indebted to him for reports from time to time by mail since his return home.

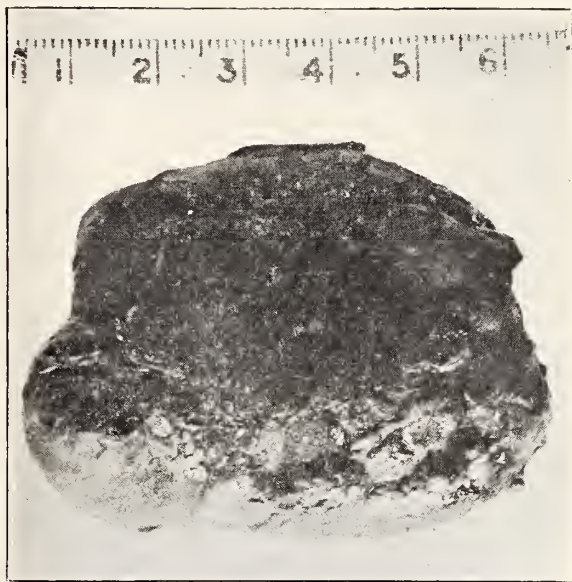
#### AUTHOR'S PERSONAL CASE.

CASE 15. L. P. Age 50. Occupation, surgeon. This report should interest us all as

many of us, if not most of us, saw him and none of us could make a correct diagnosis, although Dr. Young said there were symptoms of brain tumor and it was out of his line.

Feb., 1915, when in apparently good health, was seized with a Jacksonian convulsion starting in left arm with loss of consciousness. This occurred soon after eating a hearty meal.

In March, same year, began having severe pain and lameness in left shoulder. Would vomit from one to three times daily one hour after meals. The pain and lameness gradually extended to elbow and hand then hip, knee and foot. In fact, whole left side. Muscles became helpless and atrophied. Vomiting was persistent. In August following another severe Jacksonian convulsion occurred starting as before in left arm. This also was soon after a hearty



dinner and with loss of consciousness.

Following this there was partial paralysis of motion on left side, soon left toe began to drop and to drag—hard to lift left arm or leg. All the above symptoms gradually intensified until perfect helplessness, paralysis of left side and confinement in bed. Emaciated and anemic from not retaining foods, constipated because not enough substance entering bowel to excite peristalsis.

Tendon reflexes exaggerated on left side, sensation on left same as on right.

*Family history good.* Father died at 70 of apoplexy. Mother died at 90 of old age. She was mother of five grown up healthy children.

No tuberculosis, cancer, syphilis or hereditary troubles on either side.

*Individual history good.* Never had gonorrhea, syphilis nor tuberculosis. Had diphtheria

about eight years before with no post diphtheritic paralysis. No injury to head to which this sickness could be directly and positively traced, although two and one-half years before, while returning from St. Paul, our train plunged through bridge over the swollen Little Wabashaw river. This caused a concussion that confined patient to bed for two days, caused dizziness and lassitude for week or two, then injury unnoticed and forgotten.

Had R. inguinal hernia operated by Dr. Kellogg eight weeks before first convulsion. Struggled desperately during attempt at nitrous oxide anesthesia which was later supplanted by ether. No head trouble immediately following this. Wound healed kindly and was dismissed in three weeks. In evening after first day's work following hernia operation had what appeared to be a faint, lasting a few minutes without any muscular contractions. You will remember there occurred a real Jacksonian convulsion five weeks later and another in August. This August convulsion being followed by paralysis.

Bear this in mind as I shall refer to it later. After August would have, every four or five weeks a light convulsion starting in left hand without loss of consciousness.



*Treatment.*—Nothing to speak of being done here. patient spent some time in Henrotin Hospital, Chicago under the noted stomach specialist, Dr. Williamson, who with his diagnostician Dr. Hartung pronounced case cancer of stomach.

Next went to our eminent Dr. Harris who diagnosed case one of alcoholic epilepsy, although not a drop of alcoholics had been taken

for eight months, nor (with exception of one month when much whiskey taken) had any alcoholics been taken for a year previous to this eight months' abstinence.

Next went to West Baden where the doctor said if he was to make a diagnosis, would be inclined to agree with Dr. Williamson that it was stomach cancer. Four weeks later he said he was mistaken for had it been cancer, the treatment would have aggravated the trouble.

Next went to Rochester to Dr. Mayo who



with his diagnosticians, declared there was absolutely nothing wrong with the stomach. That it was a cerebral hemorrhage for which nothing could be done. That it would be but a short time before another would occur that would cause death.

Next went to our dear friend, Dr. Ochsner, at Augustana hospital, Chicago, whose diagnostician, Dr. Smithie, pronounced it a case of brain tumor. Dr. Ochsner concurred in the diagnosis and consented to make a decompression.

Assisted by Dr. Persey, a window about 4 in. by 4 in. was sawed out of right side of skull. Alarming hemorrhage occurred. Nothing abnormal was found. Wound closed leaving the large piece of bone out, to hasten closure, believing death imminent, (I was told). Patient rallied from operation. Wound of soft parts closed kindly. Slight bulging from blood or fluid for four weeks. Apparently slight improvement for few weeks probably from lowered blood pressure incident to the severe hemorrhage. Then grew progressively worse. Was shipped back to Dr. Ochsner in hope of having another effort made. The doctor declined to make another effort believing it useless, think-



ing death would soon relieve the suffering, and saying time was the only remedy left.

Patient not being willing to give up, arranged to be shipped to Boston to our most eminent brain specialist, Dr. Cushing. After the routine examination, Dr. Cushing concluded there was a brain tumor, but that they had gone in too low to find it in operating. He operated just above opening left by Dr. Ochsner and also being too low failed to get it, but located it and found it to be benign. Closed the wound that healed promptly. Kept dry and all sutures were removed in forty-eight hours.

Six days later a final and successful attempt was made by sawing out large piece from vertex of skull, opening dura low down, reflecting it upward, thus keeping off the large median vessels. This exposed the large tumor a fibro-endothelioma, nearly round, measuring three inches in diameter, that sprang from the arachnoid membrane near bottom of the fissures of Rolando and the longitudinal fissure.

It was carefully enucleated. By hugging tumor, injury to brain was avoided. Wound closed, healed quickly, all sutures removed in forty-eight hours. After removal of sutures, a gauze towel covered by calico cap, contrived by Miss Hanson, superintendent of nurses, constituted dressing until for cosmetic effect, a black silk skull cap supplanted the calico. A light cap was agreeable until hair grew out enough to protect head from cold.

Motion on left side began to return within two days after removal of tumor. And in three weeks could get up alone, and walk unaided, except by cane, whole length of long corridors. Left hospital four weeks after last operation.

In each of last two operations bone flaps were returned to their place where they kindly reunited. Pain in head was intense for six days after each of the three operations and only partly relieved by a 5 gr. dose of veronal, twice in twenty-four hours. Two light doses of Tr. opium were given in Chicago and one in Boston on third night after last operation.

Gradual improvement since day tumor was removed, though not quite up to normal strength at this time. Removal of tumor relieved constipation, vomiting, pain, convulsions, loss of appetite, stopped loss in weight and the paralysis disappeared from one group of muscles after another until there was not one muscle left that was paralyzed. In fall could walk four miles without stopping to rest, good appetite, ate anything rest of family could, digestion normal.

I might add there were a few light Jack-

sonian attacks for a time after operation, but none since Sept. 6. Evidently it takes a little time for brain to fall back into place and readjust itself after being compressed so long. None of these caused change of position or loss of consciousness. None occurred in night, either before or after operation.

For a year previous to removal of tumor, on Dr. Kellogg's advice, left out all tea, coffee, meat, tobacco and alcoholics. This advice is his routine on general principals, I believe. Since operation, tea, coffee, meats, tobacco have been used but no alcoholics.

During the examination by the diagnosticians for Drs. Harris, Williamson, Mayo, Ochsner and Cushing, the Wassermann and other routine blood tests were made. Every one being negative. I think every one made fluoroscopic and X-ray examinations. There were many plates made of the abdominal viscera all showing normal condition but one, that by Dr. Harting in examining for Dr. Williamson. He thought picture showed a little thickening at pylorus. After his saying so, I thought I could see it too. Eight X-ray plates of head were made by the different specialists in X-ray work—all of which showed nothing abnormal.

After Dr. Cushing examined the two plates made there for him, he remarked that they never did show anything. I understand it is used but is useless in examinations for intra cranial tumor.

There were no choked discs. All the eye examinations showed eyes perfect. Here is an important thing to remember. "A Jacksonian convulsion in an apparently healthy person past 50 years of age followed by paralysis means brain tumor." (Cushing).

If you find in addition to this choked discs and the text book symptoms of vertigo, stupification, slow pulse, etc. (all of which were absent in this case), so much more to confirm your diagnosis. It would be easier if they were all as the text books describe them.

*Cause.*—There are a number of theories as to cause of this class of tumors. The one held by Dr. Cushing is that they come from injury. Where is there a man living who has not had his head bumped? Yet how few have tumors.

Krause mentions Faradic electrode as having been tried in certain cases as a means of helping locate a brain tumor and mentions one case in which a Jacksonian attack was produced by the electrode over the tumor. Will say that no one resorted to this test in the case under discussion. Have gone into detail in these last two cases because they teach some things the others

do not. They are interesting in many ways. They show how weak we are on diagnosis of intra-cranial lesions and the need of more surgeons taking up the thorough special study of this highly important branch.

There is no danger of the field being overcrowded for sometime, at least. The obscurity of the reflex symptoms, the high operative mortality, the brain hernias, meningeal hernias, violent hemorrhage, cancer, etc., together with the uselessness of the X-ray in making a diagnosis having all had a retarding influence in the development of this special branch of surgery.

Many of these cases have shown the harmlessness of roadside, barn-yard and ordinary house dirt in wounds when compared with the infectious hospital germs. Many are the surgeons who have learned and reported this fact. Just as good results may be obtained by operating in a clean private residence as in a hospital, if equal antiseptic precautions are used. It is not as convenient, but can be done by putting enough work in the preparation.

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## REPORT OF A CASE OF BULLET WOUND OF THE PENIS, ABDOM- INAL WALL AND STOMACH.

CHAD A. VAN DUSEN, M.D.

OGDEN CENTER, MICH.

While a laparotomy for bullet wound of the stomach or intestines is fairly common, nowadays, this case seems sufficiently unusual to warrant reporting.

*Accident.*—On March 23, 1917, H. W., a male, age 17 years, while standing on the porch steps in the rain, allowed a 22 caliber rifle to slip through his wet hands in such a manner that the hammer struck the step and discharged the load, upward, first through the penis and then into the abdomen about half way between the umbilicus and the pubic hair.

*Examination.*—I was called immediately, about 8:30 a. m., and found the patient on a lounge, very pale, pupils dilated and vomiting or retching every few minutes. The vomitus contained some fresh blood. There was very little hemorrhage from either the penis or abdominal wound. The respirations were shallow and thoracic also somewhat faster than normal. He complained of severe pain in the epigastrium. The pulse was accelerated but fairly good. I gave a hypodermic of morphine sulphate grs.  $\frac{1}{8}$  and began preparation for a laparotomy in the home as I did not deem it advisable to move him, over extremely rough roads, to the hospital which was 14 miles distant.

*Operation.*—Drs. Salsberry of Lyons, Ohio and A. E. Lamly of Blissfield, Mich., also a trained nurse were summoned and the abdomen opened, under ether anesthesia, about 11:30 a. m. The incision was started at the wound of entrance and followed along the path of the bullet to where it entered the abdominal cavity and extended several inches higher. The transverse colon appeared to be directly in the course of the bullet but was uninjured, probably due to its lower position when the patient was erect. In the anterior surface of the stomach, the bullet had ploughed a groove 3 in. long perforating all the layers of the viscus at both ends and at numerous points along the course. These perforations had allowed some of the stomach contents to ooze out and together with the wound of the rectus muscle had caused considerable internal hemorrhage. Beyond the stomach, we could see no evidence of the further course of the bullet and thought, at the time, that it might have remained in the stomach. The rent in the stomach was closed by a continuous through and through suture of catgut and over this a continuous Lembert suture of linen with several locks. Several clots and some fluid blood were removed by sponging and the abdomen closed, leaving a gauze drain to the line of sutures in the stomach, from the upper angle of the incision, and a rubber tube drain extending deep into the pelvis from the lower angle.

*After-Care.*—The patient was placed in the Fowler position and continuous enteroclysis given for 36 hours. Hot water was allowed from the start in teaspoonful doses and the amount gradually increased. No food was allowed by mouth for four or five days and then weak broth and egg-albumin cautiously tried out. At the end of a week soft solids were being given and after two weeks general diet, with some restrictions. There was scarcely any vomiting at any time. Nutrient enemas were attempted but only two were retained. Morphine was used freely for four or five days and the bowels moved only by enemas for ten days.

The gauze drain was removed in 48 hours with some difficulty, and this opening promptly closed in a few days. There was profuse drainage from the lower angle of the incision which gradually thickened to creamy discharge with a fecal odor. The rubber drainage tube was gradually shortened and out at the end of a week and the discharge ceased after three weeks.

The penis became badly swollen and ecchymotic but there was little difficulty in urination and perfect resolution followed with no signs of infection. The bullet went through the right corpus cavernosum. Nothing was done to the penis beyond an attempt to keep the external wounds clean.

During the second week after the temperature



had been normal for several days, there was a moderate rise of the temperature and pulse and some pain in the left chest upon deep breathing or moving.

Upon examination, tubular breathing and dullness upon percussion were discovered over the lower left lung especially in the back. This area of dullness gradually diminished but was still very apparent on April 23rd and it was thought that, perhaps, the bullet by penetrating the diaphragm and wounding the lung had caused this consolidation.

However, H. A. Dachtler, Roentgenologist, of Toledo, Ohio, located the bullet in the abdominal wall, one-half inch deep and about the center of the scrobiculus cordis. It did not apparently enter the pleural cavity and was not disturbed as it was causing no discomfort. The diaphragm was reported high on the left side and this may have some bearing on the percussion sound.

During the third week he was up in a Morris chair much of the time and the fourth week was allowed his clothes.

During the fourth week, after eating some rhubarb sauce, there was fever, vomiting and marked pros-

tration but these symptoms were routed by a cathartic and fasting.

*Conclusions.*—I believe that the keynote of success, in these cases, is struck, by operating immediately and with as little preliminary disturbance of the patient as possible. Where the hospital is distant and the way rough, provided the surgeon is properly equipped, this is best accomplished by operating in the home.

This case supports the practice of European surgeons of operating as soon as possible all cases of wounds of the hollow organs and treating expectantly wounds of solid organs if it can be proved that none of the hollow viscera are injured.

It seems remarkable that there was not more hemorrhage from the penis as the bullet went through the corpus cavernosum. It also seems remarkable that the same bullet could wound both the penis and stomach and no other organs of importance.

The lung symptoms, during the second week, were evidently due to a secondary pneumonia. The boy seems to be in very good condition at the time this is written (May 4, 1917).

#### PROPAGANDA FOR REFORM.

*Some Misbranded Cough Remedies.*—The following "cough remedies" have been declared misbranded under the U. S. Food and Drugs Act, chiefly because the curative claims made for them were found to be false and fraudulent: Baker's Remedy for Catarrh, Coughs, Colds and Rheumatism is essentially sugar and water with a small amount of cubebs, potassium iodid and creosote. Mathieu's Cough Syrup, formerly called Syrup of Tar and Cod-Liver Oil, containing little, if any, tar and no cod-liver oil, but containing alcohol, chloroform, creosote and menthol. Forrest's Juniper Tar, containing alcohol, petroleum and oil of tar. Terraline Plain, found to be simply liquid petroleum. Terraline with Heroin, found to be liquid petrolatum with heroin. Classe's Cough Syrup, a syrup containing alcohol, glycerin, tolu and wild cherry, and having an odor of tar. Essence Menthol-Laxene, containing alcohol, menthol, ammonium salts, chlorid, sugar, drug extract and an unidentified alkaloid. Brown's Acacian Balsam, containing alcohol, acacia, nitrate, licorice, meconic acid, tartrates, reducing sugar, sodium and potassium compounds. Sykes' Sure Cure for Catarrh, containing potassium chlorate, ammonium chlorid and small amounts of alcohol, hydrastin and methyl salicylate. Warner's White Wine of Tar Syrup, containing opium and alcohol, no tar and but an insignificant amount of wine. Rawleigh's Golden Cough Syrup, containing alcohol, chloroform, menthol, guaiacol and perhaps horehound. Rawleigh's Ru-Mex-Ol, containing 26½ per

cent. alcohol and vegetable matter in which rhubarb was indicated. Gooch's Mexican Syrup of Wild Cherry, Tar, etc., containing morphin and alcohol, sugar, glycerin, methyl salicylate and benzaldehyde as flavor, and small amounts of tar and cherry (*Jour. A.M.A.*, June 16, 1917, p. 1863).

*Brom-I-Phos.*—The Council on Pharmacy and Chemistry reports that Brom-I-Phos (The National Drug Co.) is not eligible for admission to New and Nonofficial Remedies. The label declared the preparation to contain iodine, bromine and phosphorus in an aromatic base. The A.M.A. Chemical Laboratory found that Brom-I-Phos contained no free iodine, no free bromine and no elementary phosphorus; instead it appeared to be an alcoholic preparation containing iodid, bromid and a little phosphate. The Council rejected Brom-I-Phos because the statement of composition was unsatisfactory and misleading; because the therapeutic claims were exaggerated, and because the combination of bromine, iodine and phosphorus, or of bromid, iodid and phosphate is irrational (*Jour. A.M.A.*, June 30, 1917, p. 2001).

*Flavored Epsom Salt.*—When a physician prescribes a dose of Epsom Salt to be taken in one of the official aromatic waters, he does not create a new invention. Yet the U. S. Patent Office has granted a patent for the "discovery" of a method for flavoring Epsom Salt (*Jour. A.M.A.*, June 23, 1917, p. 1914).

# TRANSACTIONS

## OF THE

### Clinical Society of the University of Michigan

#### Stated Meeting, May 9, 1917

The President, CARL D. CAMP, M.D., in the Chair  
Reported by REUBEN PETERSON, M.D., Secretary

#### THE ROLE OF THE STREPTOCOCCUS IN THE RECENT EPIDEMIC OF ACUTE RESPIRATORY INFECTIONS.

HOWARD H. CUMMINGS, M.D.

Executive Head of the University of Michigan Health Service.

Acute infections of the mucous membranes of the nose, pharynx, tonsils, larynx, trachea and larger bronchi are grouped and designated as acute respiratory infections. The laity has named these infections "colds," and has been trained to believe that they are the most trivial ailments that can befall mankind. It is regrettable that many physicians concur in this opinion and fail to study cause and effect. We treat a young person for an acute respiratory infection. In a few days the individual is apparently enjoying good health. One month later we are consulted because of a swollen joint, nausea and vomiting, small amount of urine, or recurring attacks of fever, loss of strength and palpitation. We search for the trouble and find an arthritis, nephritis or endocarditis. The serious disease is treated. The innocent appearing little respiratory infection is forgotten.

During the past five years, severe epidemics of acute respiratory infections have occurred each winter in this country. These have emphasized the importance and seriousness of the respiratory infections. In January, 1912, Mann described an outbreak of septic sore throat occurring in Concord, N. H. During the winter months of 1911 and 1912 epidemics were described in Chicago, Boston and Baltimore. The Boston epidemic was traced to milk. Attempts were made to find a similar source of infection to account for the Chicago and Baltimore outbreaks. It was a strange coincidence that during this same period throughout the Middle West there were small outbreaks

of septic throat infections, followed by severe complications or sequelae such as general peritonitis, septicemia, arthritis, pericarditis, meningitis and pneumonia. Surely infected milk alone could not explain this. In Ann Arbor, over forty severe cases were observed and the mortality was exceedingly high. Hamberger, mortality was exceedingly high. Hamberger, placed the blame on the streptococcus hemolyticus.

Since 1912, each year during the months of December, January and February, and receding during March, epidemics of acute respiratory infections have swept over this country. Each year the primary symptoms have varied somewhat but the serious and fatal complications have uniformly fallen into a group of diseases caused by the streptococcus.

From 1912 to 1915 these outbreaks were described as septic sore throats, the naso-pharyngeal mucosa and tonsils showing the primary changes, but early in December, 1915 and through January, 1916, there occurred throughout the United States, an acute respiratory disease so infectious in nature that within a short period it became pandemic. The health authorities in our largest city reported hundreds of thousands ill at one time and physicians and nurses labored strenuously for two months.

Because of the widespread distribution of this disease, the rapidity of onset, the similarity of symptoms and the whole course of the pandemic, physicians and the laity used the term la grippe or influenza to designate the infection. However, when examined and studied carefully there were some points of difference between this epidemic and the last great pandemic of influenza which occurred in 1889-1900.

All of the great pandemics of influenza began in Asia or the far East and traveled Westward. This epidemic was practically confined



to the middle third of North America. It occurred at a time when thousands traveled to other parts of the country to celebrate the Christmas time. The disease manifested itself almost simultaneously in all parts of this country.

The etiology of the septic sore throats studied in Boston, has been given, namely infected milk from cows with diseased udders. A small short chain, hemolytic streptococcus was found to be the etiologic agent by Hamburger, who studied the Baltimore epidemic; Capps and Davis placed the responsibility upon the same organism. Streptococcal peritonitis and septicemia complicated many of these cases and brought them to a fatal termination. Mather studied sixty-one cases bacteriologically during the height of the 1915-1916 epidemic in Chicago. Nasal discharges and sputum examined revealed a hemolytic streptococcus in forty-six instances. Green producing streptococci, pneumococci and staphylococci were found in a smaller percentage of the cases. In only one instance was the influenza bacillus found. Capps and Moody studying the same epidemic found streptococcus viridans, pneumococcus and a hemolytic streptococcus in nearly all of the cases studied. Williams of the New York Health Department found the streptococcus and pneumococcus in the majority of the fifty cases studied. All of the observers of this influenza like epidemic failed to find the Pfeiffer bacillus, except occasionally.

During the winter of 1913-1914, Dr. Warren Forsythe and the essayist studied one thousand three hundred and forty-two cases of acute pharyngitis and tonsillitis and during the height of the epidemic, bacteriologic examinations of smears and cultures being made from the throats, and grown on blood serum agar. These showed staphylococci predominating and always a few streptococci. After our attention was attracted to a fairly constant finding, our cultural results changed decidedly. We noticed small lymphoid plaques on the post pharyngeal wall. In the center of these plaques vesicles containing clear, serosanguinous fluid or pus were observed. By mopping over these with 50 per cent. grain alcohol and curetting the central lesion lightly we were able to get nearly pure cultures of streptococci from 60 per cent. of the cases.

During the so-called epidemic of la grippe occurring last winter (1915-1916), the septic sore throat was rarely seen. The nasal and bronchial mucous membranes were attacked. The tonsils usually escaped infection and the pharyngeal

mucous membrane appeared injected giving a beefy red color. During January, 1916, the University Health Service staff observed one thousand and thirty-eight cases of this epidemic respiratory infection. Mr. Todd, our technical assistant, made a bacteriologic study of the nasal, pharyngeal and bronchial secretions from nearly one hundred cases. His findings will be published later but he has kindly allowed me to mention some of them. The work was begun with the idea of growing the Pfeiffer bacillus.

Pfeiffers' bacillus was found in but few cases. The predominating organisms found in cultures made from the mucopurulent exudate of the infected mucous membranes were pneumococci and various streptococci. One streptococcus form was present in predominating numbers in 80 per cent. of the cases. This was an unusually pleomorphic type as regards its grouping. It was usually seen in the nose and throat as a small diplococcus or even as what seemed to be a very short diplococcus in masses with a few short chains of 4-6 elements and in liquid media developed fairly long chains of 20-30 elements. On fresh human blood agar the colonies always developed a wide zone of hemolysis. This organism, though retaining the stain by Gram's method, showed a distinct Gram neutral tendency when taken directly from the throat or from the primary culture.

This work has been carried on throughout this past winter (1916-17) and the results are extremely interesting.

As a basis for this paper I have taken the Health Service records for the last four years, namely 1913 to 1917. During this time we have observed many acute respiratory infections. Tabulated, the disease observed and treated are as follows:

TABLE I.

	1913-14	1914-15	1915-16	1916-17	Totals
Acute Rhinitis ..	607	796	648	726	2777
Acute Pharyngitis	784	693	600	602	2679
Acute Tonsillitis	558	496	251	295	1600
Acute Laryngitis	166	96	139	209	610
Acute Bronchitis	269	230	135	101	735

In diagnosing and recording these conditions the chief complaint and most active condition were considered in making a diagnosis. For example if a student came in complaining of a severe sore throat and examination revealed an acute follicular tonsillitis, his condition was recorded as tonsillitis, although the examination often revealed a mild pharyngitis and rhinitis.

In considering the rôle played by the strep-

tococcus in these acute respiratory infections, I have taken only those conditions which have been proven to have the streptococcus as their casual agent or which, in our own work, showed culturally the streptococcus as the invading organism.

Septic sore throats are of different types. I have mentioned the superficial form noted during the first year of the Health Service experience. In this type the involvement of lymphoid tissue of the pharynx showing vesicles containing serous or hemorrhage fluid and pustules, was the characteristic finding. This form in our experience, subsides readily but is prone to give middle ear, mastoid and sinus involvement.

By far the most common form is the epidemic streptococcus tonsillitis. This form shows injections and swelling of the tonsil and surrounding tissues with a small amount of greyish exudate from the tonsillar crypts and at times a distinct membrane covering the tonsil in whole or in part and extending on to the pillars and pharyngeal wall. This form of streptococcal infection gives marked constitutional disturbances and is, I believe, the most dangerous type, frequently being followed by arthritis, peritonitis and septicemia.

A third type of streptococcus throat infection is the acute suppurative peritonsillitis. We have observed only sixty-one cases of this type. In all of these in addition to the brown induration and swelling about and above the tonsil there has been marked edema of the soft palate and uvula. Incision gives a seropurulent discharge but rarely is there a large abscess unless the streptococcus and staphylococcus are associated.

A fourth type seen rarely is the streptococcus cellulitis of the neck. It is usually unilateral but may be bilateral. The lymph glands and structural tissues of the neck become fused in a firm indurated mass which shows but little tendency to soften. Laryngeal complications are common with this type of infection and in two of our cases the thyroid became involved.

In studying the complications and sequelae of acute respiratory infections I have used the figures given in Table I in computing percentages.

*Otitis Media.*—The total number of cases of acute rhinitis, pharyngitis and tonsillitis treated during four years was seven thousand and fifty-six. Of this number one hundred and seventy-two cases developed a middle ear infection or a percentage of 2.4. Capps and Miller reported six cases of otitis media complicating one hundred and seventy-three acute tonsillitis

cases or a percentage of 3.4. Mastoiditis developed in fourteen and ten of these came to operation. Two of these cases were found to have sinus thrombosis. As a typical example of the otitis complications following a streptococcus throat infection I will briefly relate the following case history.

P. E., age 19, student, presented himself at the Health Service November 10, 1914, complaining of sore throat. A superficial form of streptococcus pharyngitis was found. He was given salol and phenacetin, a cathartic, advised to gargle hot saline solution and to return for observation. Two days later he returned with otitis media on the right side. He was referred to the Department of Otolaryngology. A paracentesis was made, bloody purulent discharge being released. November 15, 1916, mastoid involvement was detected. Temperature 101.2°, leucocytes 18,250. November 18, operation by Doctors Canfield and Lillie. Complete mastoid operation, ablation of sigmoid sinus and ligation of jugular vein. Patient discharged December 12, 1916, in excellent condition.

There have been no fatalities from the otitis complications.

The frequency of bacteremias in acute tonsil and pharyngeal lymphoid infections has never been worked out in a satisfactory manner. Most observers agree that the frequency is great. The tonsil is considered the usual portal of entry into the blood stream. Once having gained entrance, Elsner says, "there is always danger of septic deposits in organs which present changed or diseased surfaces to the blood or lymph stream." Rosenow called attention to the frequency of involvement of the surrounding structures of the joint following streptococcus throat infections.

*Arthritis and Peri-arthritis.*—In our series of sixteen hundred cases of tonsillitis, thirty-four or 2.1 per cent. developed joint complications involving most frequently the ankles and elbows. Elsner states that in epidemic tonsillitis, arthritis complicates 10 per cent. of the cases and occasionally leads to suppuration. This percentage is higher than in our series covering four years, but in the last two weeks we have observed five cases showing joint involvement. Three cases occurred in patients having a streptococcus tonsillitis associated with a scarlet rash. Two of these cases proved fatal. Acute polyarthritis was observed in twelve of the thirty-four cases.

It has been stated that acute tonsillitis is coincident with the arthritides in from 70 to 80 per cent. Our experience has firmly fixed



in our minds the idea that acute flareups of chronic tonsillitis usually preceded the arthritis involvement. The index cards of most of our cases of arthritis are similar to this one:

- E. J. O. Lit. 17 318
- Nov. 22-13—Pityriasis Rosea-Referred to Dermatology.
- March 23-14—Acute tonsillitis and pharyngitis.
- Oct. 27-14—Acute tonsillitis—Referred to otolaryngology. Advised to have tonsils removed.
- Nov. 18-14—Acute tonsillitis.
- Dec. 16-15—Acute tonsillitis.
- Dec. 19-15—Acute tonsillitis and frontal sinusitis.
- March 3-16—Acute tonsillitis and polyarthritis. Taken to hospital. Tonsils removed after three weeks. Completely recovered.
- March 15-17—Stomatitis.

We have classified as rheumatism those cases having stiff and painful joints, but not definite joint lesions following acute throat infection. Torticollis, lumbago and myositis have been grouped in this class. The following table shows the frequency of these sequelae:

TABLE II.

Rheumatoid Complications.	Number of Cases
Mild arthritis symptoms .....	120
Torticollis .....	42
Lumbago .....	103
Myositis .....	196

The frequency with which recurring attacks of these rheumatoid symptoms in students having chronic tonsillitis occur, and the absolute disappearance after tonsillectomy, strengthens our belief that these are manifestations of streptococcic activity in the joints and muscular system. The researches of Poynton and Paine also Rosenow's work prove this experimentally in animals.

Before leaving the discussion of arthritides, I wish to sketch briefly the histories of four students seen during the month of March.

CASE 1. N. H. Postgraduate student, age 28, was taken ill March 2, 1917, with a mild pharyngitis and rhinitis. In spite of the usual treatment the temperature rose each afternoon to 102 or 103°. On the fifth day of his illness the left knee became swollen and painful presenting a typical picture of a peri-arthritis. No other joints have become involved and although confined to his bed, he is convalescing nicely.

CASE 2. P. W., age 19. Freshman student. Was seen in his room on Tuesday, March 6, 1917. He complained of a sore throat. There was a small amount of greyish exudate on the tonsils. This tonsillitis cleared up in three days but on Saturday March 9, 1917, he complained of a painful right ankle joint. A diagnosis of acute articular rheumatism was made and the young man was taken to the University Hos-

pital. The following day, at his mother's request this student was transferred to a private hospital. At this time his left elbow showed a marked peri-arthritis and lymphangitis. His temperature was 101.6°, pulse 100 and general condition fairly good. The leucocyte count was 12800. At 3 a. m. Monday morning, March 12, he became extremely irritable, restless and irrational. Within three hours his right elbow became involved, his temperature rose to 105.2° with pulse feeble and extremely rapid. He died at 1:30 p. m. Two hours before death blood cultures were taken. These gave a growth of hemolytic streptococci two days later.

CASE 3. Mr. W. Student seen March 4 by Dr. Waldron. He was suffering from a severe sore throat. The next morning a diagnosis of scarlet fever was made. This young man was seriously ill while in his room and showed numerous casts and but little albumin before being moved to the contagious hospital which was done as soon as a vacant bed could be secured. His course while in the contagious hospital was practically the same as in Case 2. A severe peri-arthritis and lymphangitis of the right elbow and arm developed and he died of a septicemia.

CASE 4. P. P., age 23, Senior literary student was taken ill March 10, 1917, with a severe tonsillitis. Two days later he developed a scarlatinaform eruption and was isolated in his fraternity house. As soon as a bed could be provided in the contagious hospital he was moved. On March 21 he developed a severe laryngitis, had difficulty in breathing and on March 24 showed evidence of involvement of the thyroid gland. On March 26 the right olecranon bursa became involved and was opened on the evening of the same day, about one teaspoonful of sero purulent material being evacuated. Since that time the temperature has fallen and there is a tendency for the septic process to localize in the joint and thyroid. Discharged April 12, 1917.

Heart.—Endocarditis is reported as a complication of arthritis in 34.3 per cent. in children (Pribam). In our series of thirty-four arthritis cases eight or 23 per cent. developed cardiac complications. Following throat infections without arthritic complications the following lesions have been diagnosed:

TABLE III.

	Number of Cases
Mitral insufficiency .....	53
Aortic insufficiency .....	11
Mitral stenosis .....	4
Aortic stenosis .....	4

The frequency of valvular lesions in young adults is amazing. About 4 per cent. are found upon routine physical examination to have evidence of cardiac damage and fully 80 per cent. of these give a history of attacks of tonsillitis, arthritis or scarlet fever.

Within the last month, two students have developed severe cardiac complications. The first developed a severe myocarditis five days after his tonsillar infection began. The second developed a pericarditis within six days of the onset of tonsillitis.

Brain and nervous system complications, such as meningitis and neuritis have not been met in our series, however, delirium and extreme alertness and irritability have been observed in many cases during the acute stage. In four fatal septicemias this marked irritability has been the first indication of invasion of the blood stream. I consider it a very valuable prognostic sign.

Pulmonary complications have been few; only seven cases of bronchopneumonia developed after these acute respiratory infections, unless we include several hundred cases of severe bronchitis occurring during the epidemic of 1915-16, which showed no definite involvement but had bloody sputum, containing streptococci and pneumococci. Two students had pulmonary hemorrhages during this epidemic. Tubercle bacilli were found in the hemorrhagic sputum although subsequent physical examination and X-ray examination failed to disclose the area involved.

In all streptococcic infections the kidneys take the major part in eliminating the toxins and recently pathologists have come to believe that the streptococcus in the blood stream actually passes through the kidney and is excreted in the urine.

Dr. Drury of the Health Service Staff is studying the frequency of kidney involvement following tonsillitis.

It is to be expected that the kidneys would be damaged frequently by the toxins and organisms excreted. However, the very common finding of albuminuria following tonsillitis, does not mean nephritis. This albuminuria is a very transient finding but should always lead to repeated examinations.

In our series of 1600 cases of tonsillitis thirty cases of nephritis were observed or 1.8 per cent. Two of this number were of the acute hemorrhagic type. Acute parenchymatous nephritis was the more common.

Two students died from appendicitis and peritonitis of streptococcic origin. These fatal-

ities have made me extremely cautious in advising an appendectomy where an attack occurs during an acute throat infection.

I realize that this paper deals more with the statistical data than with symptoms, treatment and results; so that conclusions of value to the practitioner are not apparent. However, I have tried to emphasize the importance of supposedly trivial respiratory infections.

A few impressions drawn from our observations might be fitting.

1. All sore throats are potentially dangerous to health and life.

2. Streptococcic bacteremias are apparently frequent incidents in respiratory infections.

3. The tonsils and lymphoid tissues are the usual portals of entry for pathogenic streptococci.

4. Damaged or diseased surfaces are most often attacked by these blood invaders.

5. Absolute rest, stimulative measures and aiding of elimination are of primary importance in treating the acute conditions.

6. Possibly too conservative an attitude has been taken in the past about incising localized streptococcic foci.

7. Removal of diseased portals of entry is the best preventive measure.

8. Alertness and irritability, denoting central nervous system irritation due to toxins are grave prognostic signs.

9. Careful observation of the kidney function during these diseases is of great importance.

#### DISCUSSION.

DR. R. BISHOP CANFIELD: I think this is a very admirable and very timely paper. As Dr. Cummings read it so many things occurred to me to say that I soon found that it would be quite useless for me to attempt a comprehensive discussion of it.

I have had the opportunity of seeing some of these patients with Dr. Cummings and have talked over the situation with him many times. I have for some years been firmly of the opinion that the majority of infectious diseases are contracted through the throat, that is, through the lymphoid tissue of the throat, and I have yet to be shown that I am wrong in thinking that all infectious diseases are contracted through the lymphoid tissue. Naturally the throat, the buccal cavity, the nose and the nasopharynx, composing the cavity most intimately connected with the outside world, are the cavities through which the infection usually enters the body. If we include not only the upper end of the respiratory tract, but the orbital tissue, the lymphoid tissue of the urethra and rectum and vagina, we find difficulty in imagining another portal of entrance except through accidental wounds of the skin. The more I think of these epidemics of throat infections, the more I am convinced that in the pathologic condition of the nose and throat we have the pre-



disposing factor in infection. What the character of the infection will be depends to a considerable extent upon the strain of bacteria then prevalent in the community, the resistance of the patient, and the pathologic condition in his nose and throat.

In certain of these epidemics bacteriologists find in a great majority of cases bacteria of very similar characteristics. In one such epidemic the complications are very similar. In another complications of a different kind are found in the majority of cases. This is borne out very conclusively by Dr. Cummings in a large series of cases. This epidemic, for instance, of so-called scarlet fever which is prevalent at the present time, bears out this statement. I am strongly of the opinion that there are many mistakes of diagnosis being made. I think that many of these cases of scarlet fever are due to the streptococcus which in this epidemic is producing a rash of the character which we usually ascribe to scarlet fever. So many authors have stated that scarlet fever presented many different characteristics in different epidemics and in different patients, going so far as to say that scarlet fever may be present without a rash, without sore throat, without temperature, and without any of the symptoms that we usually ascribe to scarlet fever. In other words, they are describing a condition which is diagnosed according to the characteristics of the epidemic then present. For instance in one of the cases which Dr. Cummings mentioned, the patient had a streptococcic throat and a septic rash, fever and sickness. Naturally his case was diagnosed as scarlet fever. It would have been a mistake not to have so diagnosed and treated him, but I think it becomes a grave question as to whether such a patient should be isolated with patients who are known to have scarlet fever. Although I didn't see that case early, I am very skeptical about the diagnosis of scarlet fever. I am skeptical also of the diagnosis upon another patient of the four cases which were seen this month. I think it is altogether doubtful if a scarlet fever patient has a sore throat and then a septic elbow. I think such a patient has a streptococcic throat, a septic throat with an embolic focus in the elbow.

Dr. Cummings mentioned several types of septic sore throat. It seems to me they might be divided into throats with, first, edema as the chief characteristic, second, one in which infiltration is the chief characteristic; third, one in which the throat presents the appearance of tonsillitis; and finally, one in which the symptoms are those of a pharyngitis or a laryngitis.

Now as to which of these classes of cases is the more dangerous, there may be some room for discussion because the complications from these four classes seem to differ. For instance, the class of cases in which edema is the most marked. Such patients are very likely to suffocate as a direct result of the edema, the edema spreading down into the larynx and trachea. Such patients usually get well but if this edema increases they die as a direct result of their suffocation. Such patients do not become septic. Death is due to mechanical causes.

The cases in which infiltration is the most marked characteristic get into very bad condition because of the pressure on the trachea. Such cases are Ludwig's angina probably.

Those cases of pharyngitis in which the mucous

membrane of the pharynx is glazed and the mucous membrane of the larynx and trachea are both glazed, usually show slight superficial ulceration. The practitioner is liable to say to the patient, "You have an ulcer in the throat." He really does not see an ulcer. Those patients in which the mucous membrane of the soft palate, uvula and pillars disappear in patches are very likely to become septic and they hang on for weeks and even months, and occasionally die.

The cases in which the chief characteristics are those of a tonsillitis are the ones which in my opinion frequently develop joint symptoms which we consider characteristic of tonsillitis and later after the patient is well, develop a heart complication, and frequently kidney complications. Such patients are prone, as Dr. Cummings has said, to repeated attacks during some one of which serious complications arise.

I think that an important prognostic point is whether the patient appears sick. Now in a case of simple tonsillitis the patient has a sore throat, infiltration of the glands of the neck, large red tonsils and a fever of 104-105°, and he feels sick. Such a patient does not impress me as being desperately sick as a rule. He certainly is uncomfortable and is sick, but not desperately sick. But the patient who has a little temperature, a glazed throat with superficial losses of the mucous membrane of the palate or pharynx or false cords of the larynx, looks sick. He has an anxious and apprehensive expression, he is irritable and he shows a positive blood culture and develops a meningismus and occasionally a meningitis. He is really sick, much sicker than is the patient with an edema and infiltration of the larynx who is in danger of losing his life from obstruction.

The treatment of these patients, no matter to what class they belong, certainly is disappointing. Usually we are content to treat them symptomatically, as Dr. Cummings has said, with rest in bed and good nursing, an ice collar and some phenacetin, salol or aspirin, and hope they will get well. In many places they have been very free with the use of serums and vaccines, in almost all cases without much success. However, in some cases, two or three of my own, a brilliant success has seemed to follow, if not to be due to the polyvalent serum of Sherman. I have not been very fond of Sherman's productions, but in a few cases their use seems to have been followed immediately by an improvement. There may be some connection between that and the fact that a patient of mine who had his tonsils taken out had fortified himself before the operation with a huge dose of Sherman's serum. He had absolutely no sore throat after his tonsils were taken out. He had a membrane which almost filled his tonsillar fossae after his operation, but no sore throat and no difficulty after his operation.

Dr. Cummings' statement that he hesitated to recommend an appendectomy during a throat infection I think is a very wise statement. The surgical interference of any kind in a streptococcic throat infection is a very dangerous thing. The unnecessary interference with a localized streptococcic infection is more dangerous than we know anything about. A very slight incision in a little furuncle at the tip of the nose caused the death of Dr. Deckman of the Mayo Clinic. That may be due to the fact

that there is a very intimate relationship between the lymphatics of the nose and upper respiratory tract with the lymphatics of the base of the brain.

I have observed a very interesting relationship between infections of the throat and infections of the appendix. For instance, a patient who had had a chronic appendix with attacks repeated at more or less regular intervals for quite a few years had her tonsils taken out and now for a couple of years has not had an attack of appendicitis, depending upon the pathologic condition of the appendix. The interesting work which Rosenau has done on the throat streptococcus and the streptococcus found in the gall bladder and appendix are interesting. I honestly believe that the more we think about it the more we shall be certain of the statement that it is through the buccal cavity and nasal mucous membrane that most of the infections enter the body.

DR. WM. BLAIR: Mr. President: I was very much interested in the paper of Dr. Cummings and also in the very able discussion by Dr. Canfield. There is a phase of the question concerning the relationship of the practicing physician to his patients during the time of these particularly virulent infections of streptococcus that perhaps needs a moment's discussion. Something has been said by both the gentlemen about operating on cases of appendicitis during the time of infectious throats. I don't believe that any operation except emergency operations or operations of extreme necessity should be done in any hospital so far as it is possible to avoid it during the time that we are having a great deal of streptococcus infection. It is bad enough to have to do the emergency operations. At a time when the whole country is literally flooded with the streptococcus we should avoid doing anything that gives a chance for entrance of the infection, particularly at a time when the resisting power is lowered following a surgical operation.

Another matter which has appealed to me very strongly is the proper conduct of the obstetrician during the time of the streptococcus stress. The probabilities are that when public health is reduced to a science one or two physicians will handle all such cases in a community and a man going from a scarlet fever to an obstetric case will be considered culpable. On account of a number of confinement cases upon which I had been engaged I have refused to take any scarlet fever cases up to within the last few days during this epidemic, although some of them came among my best families, because I thought my duty was with the confinement cases which I had promised to take care of, and it would not have been fair to take dangerous cases. I believe that the general practitioner who is handling the ordinary run of non-infectious cases as they come along, and particularly some surgical work and obstetric work, will not only be relieved from caring for obstetric cases, but the authorities will provide some one man to do all of the obstetric work, and thus keep the infections isolated.

This present attack of scarlet fever, if we may call it such, is a peculiar one and one which has been widely predicted by reason of the great prevalence of streptococcus trouble which we have been seeing during the past few years, particularly the streptococcic adenitis in children, and the streptococcic forms of tonsillitis and septicemias and erysipelas. All these have been very much on the

increase in general practice during the past two years. It is quite rational to believe that following an increase of such troubles that we should have such trouble as we are having now.

Among the cases of streptococcic disease which I have been brought into contact with and which I have turned over to other physicians up to the past ten days not a single case has shown a typical scarlet fever tongue. The eruption has been atypical, some of them have had no fever, some have not desquamated afterwards. The whole arrangement of them seems to be atypical. A large number have started with respiratory troubles such as mild bronchitis, and within a few days this atypical punctiform eruption has appeared, followed by desquamation. When we get this thing properly classified I believe we are going to find that it is just as important from the standpoint of public health to isolate cases as it is to take care of tuberculosis and smallpox and cases of the more severe forms of infection.

DR. FRED R. WALDRON: My observations have been very similar to Dr. Blair's. I don't think any one would pretend to diagnose scarlet fever in these cases. I have not seen a typical throat or a typical tongue. I have seen generally a general adenopathy, and a posterior nasal bloody discharge. In one case there were more casts in the urine than I have ever seen in urine before, with practically no albumin at all. He had the rash when I saw him. These cases are streptococcic cases as far as I can see. I have not seen enough real scarlet fever to say, but the classical description of scarlet fever does not fit any of the patients I have seen. They have an absolutely typical scarlatinal rash but the brother who slept in the bed with one of my patients when he had the most brilliant rash developed no fever. We quarantined them as scarlet fever. I have not seen a typical case of scarlet fever among the entire series. They have been cases of posterior nasal infection, generally adenopathy and scarlatinal rash. The distribution of the rash has been pretty typical. I have not seen a case which I would call typical scarlet fever.

DR. JAMES F. BREakey: I should like to express my appreciation of Dr. Cummings' paper. I think it represents a very thorough statistical study which ought to be quite worth while. I suppose I would be guilty of more or less heresy to say in the present day and age that I doubt whether there is such a disease entity as scarlet fever. Not that there wasn't at one time. There is no doubt but what we have evolutionary types of various bacteria and that we have different clinical manifestations at different times during the course of an infection from the same germ. And you can recover both culturally and clinically quite different types of the germ at different times. As has been previously said tonight. I think that there is only one thing for a health officer to do and that is to classify every suspicious case as scarlet fever. However, I think that there will be an improvement upon the system if we abolish diagnosis. I don't see the necessity of naming a child upon the day of its birth. There are a lot of useless laws regarding medical matters. If you recognize that you have an infectious or contagious condition and placard it "Contagious Disease," you are accomplishing quite as much for the public good and you are wasting no time in waiting for a diagnosis. There is absolutely no doubt at all but



what, especially at a time like this, that many of the undoubted streptococcic diseases, which are not scarlet fever, are more of a menace to the public health than many of the so-called cases of scarlet fever. So if we could institute compulsory reports of all acute febrile conditions aside from acute toxemias and have them placarded early and have them quarantined and segregated I think we could accomplish much more than by waiting for a typical erythema or desquamation to make a diagnosis.

As Dr. Canfield has said, I think we do wrong in sending a suspicious case into a contagious disease hospital unless each and every one is absolutely segregated from all others, because cross infections are bound to occur. If you put a patient in there with a bad streptococcus infection and he there develops a new infection, there is considerable personal harm done to the patient without any particular benefit to the public at large. I have not seen many infectious diseases lately, though I have had a considerable experience in suspicious diagnoses. I know in my own family I sent two maids out for the most beautiful scarlatiniform eruptions and the children had been playing with them right along, but they didn't manifest any symptoms of true scarlet fever. One of the twins had a slight erythema eight or ten days afterwards and I placarded the house immediately with a scarlet fever sign in order to avoid criticism. I don't believe that we ever had a case of scarlet fever in the house.

DR. RAYMOND A. CLIFFORD: I would like to ask Dr. Cummings in regard to the new work which has been done on the bacteriology of scarlet fever.

DR. CUMMINGS: I might say that Mallory some years ago claimed to have found the germ of scarlet fever, and just recently there has been a sort of revival of his idea by several workers. They describe a peculiar small diplobacillus. This same diplobacillus can be produced on solid media by planting this hemolytic streptococcus. On beef tea it grows in chains. It is pleomorphic. One man grows it as one form and another man grows it as another form. One says it is a small staphylococcus. Another says it is a diplococcus, and another calls it a diplobacillus. Mallory has produced this diplobacillus as a causal agent of scarlet fever. When they all get together they will find out that they are dealing with the same organism and that is what Mr. Todd is doing in his paper.

DR. HAROLD I. LILLY: I really have nothing to add to what has been said. Dr. Cummings and the other gentlemen have covered the subject very thoroughly.

I would like to add something in regard to what Dr. Blair has mentioned, that is, the occurrence of glandular conditions in children. Fortunately, while I was located in Chicago, I had a great deal to do with children and ran into several epidemics of this gland condition where the patients were very sick. Dr. Baxter of the Children's Memorial Hospital has reported from his private institution-practice some 150 cases where all their glandular conditions have originated from the nasopharynx. If you have noticed, most of the cases have some nasal discharge at the time of the glandular disease. Although they may not have anything appearing in the throat, still you can isolate streptococci from the nasopharynx.

It occurred to me during the discussions and the

original paper, that it all has emphasized the importance of the throat infection as Dr. Canfield has said, and the importance must lie in not considering the affections too lightly. Any sore throat is a latent menace to the health of the patient. When the condition in the course of two or three days, does not show the signs of improvement, we must begin to look for complications, for things which would set him back. I was very much surprised in my clinic last year to see people who were living in poor environment develop kidney complications with sore throats, especially in peritonsillar abscesses or quinsy. The patients did not look well, and when you examined the urine you would find a severe nephritis. That impressed me very strongly last winter and I collected a series of twenty cases in which I have statistics. This work has not yet been published.

Another thing which occurred to me was the fact that during these cases of obstruction in the pharynx and larynx due to edema, one must not be too quick to intubate in a laryngitis or too quick to enter the trachea because in these cases very grave damage may be done by the pressure that you may produce by the intubation tube and by opening up a new avenue of infection when the tracheotomy is done. These cases respond about as quickly to other treatment. I had the opportunity of seeing a friend of mine in Chicago come down with a severe throat infection and within eighteen hours he had a severe laryngitis and tracheitis with marked dyspnea. Fortunately he recovered rapidly under steam tent inhalations, and it was very gratifying to see the quick relief from the ice collar and the steam inhalations. Furthermore, the laryngologist is naturally the last man to see these cases, and they are either in grave straits, or are seen for the satisfaction of the patient who wants consultation in a delayed case of convalescence.

I believe that the work that the Health Commissions and school physicians are doing, especially in children in the school examinations in Chicago, is a great work. They are lessening the mortality and the severity of these conditions by not allowing patients to come back to school within a certain time. They have two or three different types of quarantine which they designate A, B, C and D. The school authorities can keep any child out of school with any sort of sore throat until he is sufficiently convalescent.

I might add that I was associated indirectly with the work that Dr. Capps of the Billings staff did in Chicago last winter. The patients were thoroughly worked over. Nothing was left undone in the work on these cases and they afford a very authentic report. Dr. Capps is a very thorough man and a man of very high ideals.

In regard to any medicinal treatment, I don't know what the action of salol and phenacetin is on the throat, but I know that the ward cases which came into my clinic last year were kept under observation with an ice collar and very frequent hot gargles. There was no routine medicinal treatment. I think the hot saline gargle is as efficient as anything we may do in throat infections. I don't believe a gargle is any good without heat. The hot gargle relieves the tension and has the mechanical effect of cleansing the mucous membrane. All lymphoid tissue is more or less cryptic and there is a ten-

dency for the material to collect within the crypts. This material is forced out of the crypts and the mechanical cleansing I believe is of a great benefit.

DR. FRED R. WALDRON: Dr. Lillie brought to my mind the kidney complications. I have only seen albumin in one case that we have had. It has happened that every case of idiopathic Bright's that I have ever seen has been preceded by tonsillitis, and it is generally a tonsillitis which has not been seen by a physician at all, a very light tonsillitis.

DR. R. BISHOP CANFIELD: I believe that every case of disease, aside from the purely surgical sicknesses, is preceded by a sore throat. All the cases of pneumonia are preceded by sore throat. An acute sore throat precedes bronchitis, acute nephritis, acute gall bladder cases, and all acute conditions, even typhoid. I have an idea that the infection in typhoid fever might very well make its entrance through the lymphoid tissue of the throat and reach the glandular tissues of the neck, passing down through the chain of lymphatics that passes through the diaphragm and reaches the lymphatics of the peritoneal cavity. We don't know much about what happens during the two weeks of incubation in typhoid fever. Autopsies show that the oldest pathologic changes in typhoid fever are not in the Peyer's patches but in the lymphoid structures of the mesentery which are in fairly direct communication with the lymphoid tissues of the neck.

DR. FRED R. WALDRON: Isn't there a typhoid septicemia preceding the symptoms?

DR. R. BISHOP CANFIELD: Yes, there is an ambulatory type. The bowel becomes infected secondarily from the lymphoid tissues of the mesentery. I don't think it is going too far to say that the patient becomes sick not as a result of drinking typhoid water which passes into his stomach, because the chances are very much in favor of the typhoid bacillus being destroyed in the stomach, but it is quite possible that this is a lymphoid infection. I have been trying my best to have an opportunity to take out some cervical glands in a typhoid fever case to study this question. But, of course, it probably doesn't make any difference to the patient how he gets the disease, after he has it.

DR. LILLY: I might add that during the recent epidemic of anterior poliomyelitis in Chicago a review of the patients at the Chicago Hospital shows that the tonsillectomized patients had very light attacks, while the cases of bad tonsils had the worst attacks.

DR. R. BISHOP CANFIELD: In the epidemic here of two years ago, only one of the patients had had his tonsils taken out.

DR. JOHN A. WESSINGER: We are getting into deep water in this discussion. But there is a large grain of truth in what Dr. Canfield says, if you make close observations of a large series of cases. I am coming to the belief that a great deal of the diseases which the human flesh is heir to enters through the lymphoid tissue. In our last typhoid epidemic in many cases the incubation period was two months. I believe that a person can become infected with typhoid fever and be almost immune so that it takes a long time for the bacilli to grow.

The present condition among us, undoubtedly, in

my opinion, enters through the throat, even though you don't get a sore throat always. It is not always necessary. We are having atypical cases of this condition, but from a public health viewpoint I have to handle it as scarlet fever. You see case after case that has no temperature, very little or no eruption, and yet that patient desquamates from head to foot. Then you see another series where the patient comes down with a sore throat and high temperature and lobster skin without any desquamation whatever. Such things are difficult to explain when we hold ourselves to the classical scarlet fever. I am always afraid of scarlet fever because we don't know where we are with it. We have epidemics in which nearly every case is fatal. Then we have an epidemic with no fatalities. This has been the battle of Dr. Cummings' life and of my life. He has written an admirable paper and we are agreed upon these points and we must handle it from a public health viewpoint at the present time. As Dr. Waldron said, both of us agreed that a certain case was not scarlet fever, but I put a scarlet fever sign on the house.

Dr. Breakey's idea is a good one about a placard on the house stating, "Contagious Disease Within." But if I did it, the people would bother me to death asking about it and I wouldn't get any rest at all until it was diagnosed. However, I believe that is the safe and scientific thing to do.

DR. JAMES F. BREAKEY: Regarding the contagious disease sign, if you are called to placard a case with a scarlet fever sign and the case is pretty well along in its course and the sign comes down in ten days, the next person who has a scarlet fever sign up and has to have it up for six weeks wants to know why he can not get out of quarantine as quickly as the other fellow did, whereas if you say simply, "Contagious Disease" no such difficulty can arise.

DR. JOHN A. WESSINGER: The State Board of Health demands that we keep the minimum quarantine of thirty-five days in scarlet fever cases. I have had several fights with the Board about that. I don't see any reason for keeping a sign up after the patient has completely recovered from the disease, and I have tried to be fair and sensible about the matter and let patients out as soon as the danger has passed. There is no sense in having a definite period of quarantine for a case of any disease anyway, especially scarlet fever where the cases vary so in nature. Now I write under the case in my report to Lansing, "Very mild cases," and get away with it without any controversy.

DR. RAYMOND A. CLIFFORD: This discussion has brought out a great many interesting points. It has been mentioned here tonight that something else is necessary to decide the infection, and that is the resistance of the patient. As regards the general practitioner, I believe that we shall always have scarlet fever or its equivalent. But the general practitioner in relation to the people that he meets and knows intimately has a work he may perform and do the community more good than in just fighting disease when it is present and that is to teach the patient how to keep their elimination active. I believe that if every individual knew about these functions that the infections would have very much less material to get hold of, and when you are talking about



prevention, I believe that is the foundation for all of it.

DR. ROY A. BARLOW: I don't feel that I am in position to add to the discussion. I was fortunate in seeing two of the four cases cited by Dr. Cummings. They were streptococcal infections and it was extremely interesting to note their rapidity and virulence. The man with the infected elbow, who later died, developed an acute ear during the night. I saw him the day following and there was sufficient drainage. It was impossible to see how much destruction was present at that time, but in twenty-four hours the entire tympanic membrane had been eroded leaving nothing but a thin shell of the membrane around the annulus. This happened within forty-eight hours of his first pain in the ear. That was an extremely instructive thing, the rapidity of the infection in that case.

It has been worked out by Wright and Smith of New York that the lymphatics of the neck empty rather freely into the thoracic duct and perhaps that will throw some light upon the fact that we get the tonsillitis, the infection entering the blood stream and then is carried to the different foci.

DR. G. M. HULL: I didn't come here to talk. Dr. Cummings must know that I was greatly interested in his paper or I would not have come out this kind of a night to hear it. I think that any one who has been through the amount of sickness of this kind which we have had would certainly be interested in it. No one has said so far what they do for it. I am situated so that I don't have a pathologist at my elbow. I have to take the cases and do the best I can. I have been listening for somebody to tell me what they have been doing with them. Some of these people might like to know what an average country doctor does for these cases. I don't believe there are any two cases of the disease which are alike. Some are not sick, others are sick from the start. I don't think that you can have a routine line of treatment for them. Mine runs about the same way. I start in with salol and phenacetin. Speaking of rheumatic arthritis, all this winter about as soon as I have gotten the fever broken I pushed the salicylates. I have not had very many cases of rheumatic arthritis. They get ten grains of salicylates as soon as I can give it to them. Then I give them quinine, iron and strychnine, open up the bowels, and give them all the water they can possibly drink. I would like to hear the rest of you tell what you have been doing. We let the cases of otitis media burst. I haven't had many cases of mastoid abscess. I don't think I have had a mastoid abscess all winter long and I have had a lot of gathered ears. I use argyrol, or iodine and glycerine to paint the throats as a local antiseptic measure.

DR. R. BISHOP CANFIELD: During the epidemic of throat infection which we had in the Hospital last winter, all the nurses wanted to come to the Otology Department to be treated and get well. They weren't satisfied with the treatment that they were getting on the Medical side. This made Dr. Schmidt feel slighted and he asked me what I was giving and I said, "Salol and phenacetin." He said that was what he was giving. I give phenacetin to make them feel good, but the salol is to improve their condition. I give five grains of phenacetin and five to ten grains of salol every two hours until

six doses have been taken. Then I stop the phenacetin but I keep up the salol. They get well in three days. On the Medical Service they were giving them equal amounts of phenacetin and salol and it took them three weeks to get well.

DR. WM. BLAIR: I have been giving quinine along with the phenacetin, eight grains of phenacetin and one grain of quinine.

DR. S. M. YUTZY: I should like to ask Dr. Cummings if he was able to see any difference in the streptococcus in the different classes of sore throats which he had. In the epidemic in Chicago many years ago Davis said that he could differentiate a particular streptococcus.

DR. HOWARD H. CUMMINGS: We were not able to look into a throat and say, "This is a streptococcus mucosus throat and this is a hemolytic streptococcus throat." In the last three years we have found this hemolytic streptococcus in the different forms in 80 to 90 per cent. of the cases. Every once in a while we get viridans which produce a little green pigment. We sometimes get streptococcus mucosus, but always in with it we get the smaller hemolytic streptococcus, and I believe that is the organism which has been doing the work in the complications. I don't know that we have ever demonstrated viridans in any chronic case.

DR. YUTZY: Erysipelas was mentioned following tonsillitis. I have a case who had quite a severe infection of the nose about a week before the erysipelas started and with no sore throat so far as I could make out. He got well from his nose infection and about a week after that he was taken with a severe attack of facial erysipelas. I don't know whether there was any connection between the infection of the nose and the erysipelas. It followed so close that it seems that there might have been some relation.

DR. MAX PEET: I was interested in one case which Dr. Cummings had. The nurse said that the boy rested on the elbow which became later infected. It became sore and tender and it is in that elbow where the streptococcus started in. This was a purely streptococcus infection of olecranon bursa.

Last Saturday I operated upon a baby with an enormous streptococcus abscess on both sides of the spine. It didn't pass across the spine in any way whatever. I could not with a probe make out where it got down. I should say that this child had a retroperitoneal abscess which perforated under the latissimus dorsi on both sides of the spinal column. The whole family had had sore throats. The child had it last. The mother said an abscess burst in the throat. As a result the baby got this big streptococcal abscess.

DR. NELLIS B. FOSTER: This paper of Dr. Cummings is most instructive. It calls attention to some of the little things which amount to large things. There really is a basis for preventive medicine and that is what we are all striving for at the present time. The importance of these so-called minor infections has not, I think, been realized until the last two or three years. It has been borne upon me in studying rheumatic fever, the almost invariability with which one gets a history of tonsillitis if one takes the trouble to inquire into it carefully. As Dr. Cummings has correctly said, these things

are regarded by the laity as of minor importance. In a great majority of cases they don't result seriously. So when an individual has a sore throat and gets over it, the complication which arises in the next month perhaps, seems a new disease. The two occurrences are not associated. The same is also true of all other complications which Dr. Cummings has mentioned, notably nephritis. We have known for a long time that acute nephritis following tonsillitis is relatively a common thing, and yet it has taken years to bear it in upon us that the sub-acute or early chronic nephritis is very frequently associated with a focus of infection somewhere in the respiratory tract.

I do not think I need to discuss this matter of respiratory infections further excepting to commend Dr. Cummings' work upon the subject. I think it is most useful. It is the kind of work that we must fall back upon ultimately for active measures in preventive medicine.

DR. HOWARD H. CUMMINGS: If I should tell you just how I feel about these acute infections and their relations pathologically in the nose and throat, I am sure you would say I am in league with Dr. Canfield. The longer I stay in the Health Service work the more I am impressed with the pathology of the nose and throat. I cannot agree with him that all the infectious diseases get in through this way, but when he says all the lymphatic channels, I think he has covered the mode of entrance of all the infectious diseases.

He made mention of the relation of tonsillitis to appendicitis. If one of your patients gets an attack of appendicitis following closely on an acute tonsillitis, it is my opinion that that patient should be watched very carefully and not operated unless absolutely necessary. I have only had two fatal cases. We have about forty students operated each year for appendicitis. These cases are in no way related to throat infections. Two cases have occurred within two days after tonsillitis. They have been operated and both died promptly of streptococcus peritonitis, and Dr. Warthin stated that he found streptococci in the serous coating of the appendix.

As to Dr. Blair's remark about the strawberry tongue and the atypical course that these cases run, Dr. Kieffer, who has had a wide experience with scarlet fever, says there is no such thing as a strawberry tongue in scarlet fever. If you have it, it comes late. He says the typical scarlet fever tongue is a pearly gray tongue. Later on the red papillae comes through the gray base, then the strawberry tongue develops. He says not to wait for strawberry tongue to diagnose the condition.

I don't believe that any one can diagnose a streptococcal sore throat with a scarlatiniform rash from a case of scarlet fever. We have to treat these cases as scarlet fever, however, and they must be so handled.

As to placarding for contagious diseases, I would say that the influence on the patient is very marked when you put up a sign reading scarlet fever. If you put up a sign, Measles, or German Measles, you

are liable to come back and find that the patient has gone to the movies. If he has scarlet fever he will stay in.

Dr. Lillie has mentioned nephritis and albuminuria in a series of cases which he observed. Dr. Drury of the Health Service staff is working out the frequency of albuminuria in streptococcal cases at the present time. I believe that during the first two or three weeks albumin will be found sometimes following the streptococcal infections. Nephritis comes on from three to five weeks after the streptococcal throat or scarlet fever infection. We are prejudiced about one symptom of nephritis. I have always laughed at backache in nephritis. I believe I have assumed such an attitude because of the newspaper patent medicine advertisement. I have always examined the boy's urine when he would come in with a backache but I thought it was something else. I must say in studying our cases of nephritis that backache is a pretty common symptom. Of course, a lot of it is due to myositis, actual infection of the muscles.

Dr. Hull asked about the treatment. I believe most of us have been doing what he has outlined. In my paper I thought I outlined the treatment of the condition, but if you did nothing more than that, the patient would discharge you. I think rest is the important thing to prevent metastatic processes. I believe that many cases of arthritis would be prevented if patients were not allowed to get up too soon. We have used salol and phenacetin to keep the patient comfortable and we have used salicylates. I believe it is criminal to put highly astringent medication upon an inflamed pharynx or tonsil. All the bad cases I have seen have followed this treatment. You are simply sealing up Nature's avenue of escape for the poisons and bacteria. You coat over the follicles of the tonsil, and instead of the material draining out onto the pharynx, the patient is absorbing all the contents and the bacteria go into the blood and lymph streams rather than over the mucosa. The hot saline gargle is best. It is a physicochemical proposition. I use a half teaspoonful to a glass of hot water. That is a little stronger than normal salt solution. The rationale of the thing is that you are putting a hypertonic solution on one side of a membrane and you mechanically attract poisons from the membrane.

Dr. Yutzy has mentioned erysipelas. This is always mentioned as a complication of streptococcal infections. In his case it followed a nose infection. It is not uncommon. I didn't mention that in our complications. Since there are many I omitted. We have had three or four cases of erysipelas. Another thing which we have had is erythema nodosum which has been proven to be a streptococcal infection.

With regard to Dr. Peet's remark about the patient's resting on his right elbow, three of our cases developed arthritis in the right elbow. It is a well known fact that if a boy has had a broken ankle or broken bone, that joint or bone will develop an arthritis or osteomyelitis. Former traumatism offers a place of deposit for these septic organisms.



## INDICATIONS AND CONTRAINDICATIONS IN THE TREATMENT OF HARE LIP AND CLEFT PALATE.

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Though the subject of the operative treatment of hare lip and cleft palate has been under discussion for some time, there still remain many considerations in the care of these cases which are not yet settled. The best age at which to operate is still a point under discussion, and though this question is in large part settled in the minds of the most experienced workers in this field, it is still undecided by the general practitioners who are first consulted for advice in the treatment of these unfortunate malformations. Just as it is necessary to advise intervention at the proper age, so is it necessary to know the contraindications to successful treatment. Furthermore, should the operator be concerned with the routine treatment in simple and in special cases and complications? To the end that the profession may be reminded of what can be done in these malformations, when and how best accomplished, I offer the following discussion.

In deciding upon the proper age for operation, we find ourselves involved in an old controversy. The earlier workers in this field hesitated in advising any intervention in very young infants. The risk was considered too great, the field of operation too small. A considerable difference of opinion existed, also, as to the proper order of procedure in repairing cleft of the hard and soft palate and hare lip. Some preferred to repair the lip first believing the palate closed considerably after this operation. Others wished to unite the palate first to secure the maximum space for the field of operation. These points have gradually fallen out of the direct line of debate in view of the more important problem of age for surgical intervention and its subsequent risk to the patient.

The believers in operation during early infancy do so on the following grounds: First, these babies are usually very difficult to feed. They nurse poorly if at all at the breast. Some even can not nurse with a bottle. They require special care. They are of weakened vitality, subject to pneumonias, toxemias and malnutrition. As these babies are given a chance to breathe and take nourishment normally, in such proportion do they gain weight and health. In addition to this vital consideration is the

ease with which the cartilaginous structure of the maxillae are moulded in early infancy. Lips repaired at this time heal beautifully. There is sufficient exposure for good technic on the part of the operator. There is a minimum of shock due to the incomplete development of the nervous mechanism in the child. Lastly, early repair predisposes to development of normal speech.

The opponents to early operation fear the infant mortality on poorly nourished babies. This argument is weakened in view of the statement that one-half of the children born with extensive clefts of the palate die within a few days after birth. The dangers of postoperative pneumonia is a strong argument. The liability to permanent disfigurement due to too early operation is strongly emphasized. The destruction of tooth buds and repair of clefts in palate and lip when facial contour is so poorly established, leads, they believe to unnecessary facial deformity. Lastly, the speech defects following early operation are believed by some to be greater than when operation is postponed. The logic in this statement is faulty in view of the good muscular development in palates closed early as opposed to the atrophy of disuse in those in which operation has been postponed. Comparative cases must bear witness.

Beyond the questions of when and how to operate we find very little else in the literature. There are, however, certain contraindications to operation which should vitally concern the operator. If he is to gain the best results he must not only bear these in mind but must impress them upon the practitioners from whom he draws his clinic. The hereditary factor as it influences a patient's general health or even his environment must be considered. The patient's own ability at co-operation in the treatment, his intelligence, his personal hygiene—all are to be reckoned with in a successful result. The local condition of the ear, nose and mouth is not emphasized. Among writers on the subject, Brophy has taken most careful pains to call attention to these points. Carmody also makes slight mention of them. Others seem to focus their attention almost solely on operative method.

Another thing of which we find little mention in the literature is the postoperative care. This has been considered mostly as generalities. Practically no attempt is recorded to determine a means of diet and asepsis which would be especially applicable to the conditions met with in hare lip and cleft palate surgery with its diversity of operative methods. Brophy alone

gives detailed description for postoperative care. His chief routine consists in gastric lavage to prevent vomiting and a regular use of boric acid or normal saline sprays. Argyrol and iodine are used to some extent as local applications. Other treatment is largely symptomatic.

In the 66 cases of hare lip and cleft palate treated in the University of Michigan Hospital Clinic in the last fifteen months, the conditions under which treatment was undertaken were most varied. The age variation was one week to thirty-two years. This number includes patients from a wide diversity of social conditions. The physical and mental condition varied accordingly. Among the infants many forms of physical defect, malnutrition and disease were met. Heritosyphilitics and rachitic children, uncared for and ill nourished, were common. Babies from good homes where hygiene and careful nursing prevailed were in the minority. Between the ages of three and twelve nearly the same types were seen with the added factor of speech. Here a troublesome complication frequently arose in those children who from lack of careful training in obedience proved inveterate talkers to the detriment of success. From the nature of the clinic as a state institution and refuge of last resort, a rather large proportion of cases were seen in which more or less unsatisfactory attempts at repair had been tried elsewhere.

The choice of time for operation does not materially differ from that recognized by the majority of oral surgeons today. In cleft of the hard palate, operation is advised as soon as possible after birth. If hare lip exists, repair may be done any time not less than five days following wiring of the hard palate, but preferably in early infancy. Repair of cleft of the soft palate is not attempted before the eighteenth month or before the child would normally begin to talk. This time is chosen to allow the patient to learn phonation as nearly as possible under normal conditions, that is, with a complete palate, and on the other hand to afford the surgeon the better risk of operating on a case old enough to bear well the strain of a general anesthetic. This age also furnishes a much better development of tissue with which to effect a closure of the cleft, than in younger infants. Cases appearing for operation beyond these ages are advised according to their general condition to stand an operation. These rules apply only in uncomplicated cases—cases which lack other marked physical defect and are free from constitutional or local disease.

The preparation of the patient is very simple. A simple enema is given the morning of operation, with the last feeding at six a. m. Atropin suphate, gr. 1/300, is given by hyperdermic just preceding operation, to all babies over three months of age. This preparation seems entirely adequate in clean cases but we have found it advisable in the large majority when the patients entered the Hospital with any suspicion of a coryza, to institute further measures which will be described later. These latter we have come to use almost routinely in all cases.

I do not intend to discuss operative method except in so far as it affects postoperative treatment. Selected horse hair is used exclusively for coaptation sutures as it is productive of less irritation and infection. The local preparation of the field is done by swabbing the palate or lip with tincture of iodine. Argyrol is applied to the suture line before the patient leaves the operating room. Anesthesia is usually obtained by ether with the Fillebrown method. This is necessarily in the hands of an expert with these young patients and a state of analgesia is preferably maintained. This allows of such ready recovery that should excessive hemorrhage or mucous be encountered, the patient can be allowed to swallow rather than aspirate. A constant suction aspirating outfit is invaluable in these cases and saves much worry over aspiration pneumonias as well as saving time for the operator.

The postoperative care consists in a special diet and means for antisepsis in the mouth. In infants, feedings are given every two hours and started within two hours after return from operation. The formula given before operation is modified to a two hour schedule. Feedings are given by sterile rubber bulb. Other patients are on a two hour schedule. All nourishment is liquid and the quantity and caloric requirements are arranged according to the patient's needs. Cuffs are placed over the elbows to prevent the child from getting his fingers into the mouth. The mouth and nose are sprayed twice a day with 20 per cent. argyrol and every two hours with alphazone, after feedings. Spraying is accomplished with an atomizer. The nurse is cautioned not to use swabs or other appliance in the mouth. This routine is maintained following all hare lip and cleft palate operations. Silver wires in the hard palate remain thirty days. Sutures are left in the soft palate 11-14 days, in the lip 6-10 days. Patients are strictly confined to bed except adult cases and rigid contagious precautions exercised over their



rooms. Fresh air is encouraged. Special nurses have charge of these cases with not to exceed four patients to a nurse.

Such measures as outlined above suffice for an uncomplicated case. But unfortunately such cases are scarcely the rule in oral surgery. Therefore, certain special measures must be used to meet the emergency of complicating conditions. Of course the general physical condition of the patient is taken into account and careful examination is made of heart and lungs. Intestinal conditions are not always so obvious nor so readily met. When patients can be detained in the Hospital several days or more before operation, such conditions can be diagnosed and usually eliminated. The most serious complicating factor to successful cleft palate work, however, comes from local pathology in the ear, nose and throat. And this is too often seen. Interference in the surgical result from these sources is luckily not so common in the earlier operation for cleft of the hard palate and hare lip. Before any operation each patient is carefully examined and if serious complicating pathology is present it is removed first. If not serious, the patient is allowed to leave such treatment of these conditions until a later date. Preparatory to operation upon the soft palate, care in this regard is imperative. First of all, the patient must be observed for the possible "cold" which is so frequently contracted when coming to the Hospital. All patients are referred to the Department of Otolaryngology for examination and treatment if indicated. In the event of operation upon adenoids and tonsils the cleft palate operation is postponed at least three weeks, for complete recovery. Discharging ears often necessitate a longer period of treatment and it is with utmost trepidation that operation is advised in these chronic ear conditions. In the less serious local infections, the patient is put through a rigid course of preparatory treatment. The nose is irrigated every two hours with a preparation of  $\frac{1}{2}$  per cent. zinc chloride in saturated boric acid solution. This is also used as a spray in the mouth in the more severe coryzas. Argyrol is used as a spray twice a day in the mouth. Operation is not attempted until the local inflammation has definitely subsided.

Complications may arise in postoperative care. In a small percentage of cases excess tissue slough or infection takes place. In our experience these cases arise from certain definite causes. Occasionally a case comes to operation with some chronic nasal or middle ear

infection which is either so slight as to have missed detection or is very resistant to treatment. The percentage of failures is high in this type. Bad teeth in this clinic have proved a rare complication, as would be expected since the growing tendency to early operation leaves but few adult cases where such conditions are prevalent. In the course of routine examination this must always be taken into account. Postoperative pneumonia may lead to sufficient infection in the nasopharynx to interfere with perfect union. Old scar tissue from former operation is not in itself a serious complication but as it is so often accompanied by local infectious conditions, it may prove disastrous. The very existence of scar tissue is too often a sign of previous operative failure in the presence of infection. Therefore these cases must be most carefully examined before operation. When sutures have loosened they should be removed. No attempt should be made to repair the gap in the presence of infection. Vomiting during the first day or two following operation undoubtedly may cause serious strain upon sutures, but it is a complication very rarely encountered in this clinic. No attempt at routine gastric lavage is made to avoid this sequela.

In the event of postoperative complications arising in the ear, nose or throat, many remedies may be tried. Whereas in this clinic sterile water was formerly used as a spray or irrigation, we have now passed through the stage of normal saline, boric acid solution, hypertonic saline, carbolic and borax solution, and now find zinc chloride in  $\frac{1}{2}$  per cent. solution in suitable medium, controls secretions when they become particularly thick and ropy. In extreme cases this is used every two hours as a nasal douche.

One other complication which should not be omitted is that of the persistent talker. The patient must be encouraged and persuaded by every means possible to refrain from talking unnecessarily. We have never resorted to hypnotics to produce the requisite quiet.

Our advice to patients with partial failure of union is to carry out a routine treatment of the cleft with silver nitrate and wait six months before further operation is considered. In complete failures from infective causes, six months is the minimum time to elapse before a second operation, other treatment to be carried out in the interval as indicated.

A summary of cases since Oct., 1915, is as follows:

Total number of cases of cleft palate only . . . .	28
Total number of cases of hare lip and cleft palate . . . .	33
Total number of cases of hare lip only . . . . .	5

Total . . . . .	66		
	Successes	Partial Failures	Total Failures
Under 3 Mos. . . . .	4	1	0
Age 3-18 Mos. . . . .	13	1	0
18 Mos., 3 Yrs. . . . .	15	5	1
4-7 yrs. . . . .	5	2	2
8-18 yrs. . . . .	9	3	1
Over 18 yrs. . . . .	3	1	0
Total . . . . .	49	13	4
Ear, Nose: Treated. . . . .	12	5	2
and Throat: not			
Pathology: Treated . . . . .	3	6	1
Total . . . . .	15	11	3
Other Complications:			
Pneumonia and			
bronchitis . . . . .	3	1	0
Talkers . . . . .	0	0	1
Previous operation. . . . .	3	4	1
Gastro-intestinal . . . . .	1	0	0
Persistent thymus . . . . .	0	0	1
Syphilis, etc. . . . .	2	1	0
Total . . . . .	9	6	3

Certain significant facts appear from this summary. In 66 cases there were no deaths. Of the 13 cases in which success was not complete, 11 had ear, nose or throat pathology. Twenty-nine of 66 cases were so affected, only 18 of all other complications. Facts the table does not show are that two failures were on the same patient, that of four partial failures on patients previously operated all had nose or ear infections. One case accounting for two failures was both an inveterate talker and a carrier of chronic ear infection. One failure had both an enlarged thymus and chronic otitis media. Partial failures include everything from a sloughed suture in the ala of the nose, or a hole in the soft palate the diameter of a match to a considerable cleft remaining in the soft palate. These results were recorded at the time of discharge in each case. The age of the patient is not an important factor in determining the immediate surgical result in complicated cases except in relation to persistent talkers. Careful early examination and treatment of probable complications are essential to the success of cleft palate operations. Return cases must have special care and treatment before operation is advised. Time spent in this direction is most valuable to the patient.

The results obtained in this clinic though not altogether satisfactory, point definitely to certain growing truths in the care of these mal-

formations. Early operation following closely the Brophy method, has been in every case productive of good results. The immediate health of the patient is remarkably improved. Observations upon cases operated upon by these methods after sufficient lapse of time have shown very satisfactory functional results.

Routine general and local preparation of the patient seems indicated in all these cases over an extended period, judging from the large proportion of complicated cases and the results in these in which such care was not extended. Most careful precautions are necessary in isolating these cases from exposure to the usual hospital infections and contagion. Lastly the nursing standard must be maintained if uniform satisfactory results are to follow. The ideal, not always attained, is a graduate nurse of special training and capability to understand the particular problem in surgical care that is required in this type of case, one who is always interested in the result, and who may be relied upon absolutely to obey orders but who is sufficiently keen to notice any need for individual changes in routine treatment.

I wish to call attention especially to the use of antiseptic sprays and douches as applied especially to cleft palates complicated by profuse nasal discharge. There seems little doubt from our results and those of others that simple mechanical cleansing of the parts is sufficient in clean cases. But the problem changes when during postoperative treatment or before, the patient develops a profuse mucous or mucopurulent discharge. This question concerns the rhinologist equally and many remedies have been offered. In my experience argyrol used as a spray in the mouth or nose is probably no more antiseptic than normal saline. When it is desirable to coat over a clean dry wound with a mild antiseptic, argyrol may find a place. For use in the mouth where secretions are constantly washing it away, little benefit can be expected. In those cases of mouth breathers where its use is attended by drying and caking it seems equally ineffective and even dangerous in coating over a surface which is almost surely infected. The use of hypertonic salt solution in excessive discharge seems to provoke a freer, thinner mucus. When the mucus becomes particularly thick and stringy, saline is not sufficient. We have no reason to expect better results from boric acid solution. This is so slightly antiseptic under these circumstances that it offers little advantage over saline. We have not employed alcohol and boric solution



as recommended by Brophy. Of the more recently advocated antiseptics, only alphasone has been tried, and with considerable success if used in strong enough solution to exhibit a definite astringent action. As a solvent of mucus it is moderately effective. At the present time the most efficacious preparation in our hands has been zinc chloride in  $\frac{1}{2}$  per cent. strength. This seems to combine with its definite antiseptic properties sufficient protein precipitant action to relieve the most troublesome nasal discharge. We attribute its action not to solvent power but to astringent effect. This involves protein precipitation in the mucopurulent discharge and excites sufficient local irritation to cause a free thin mucus which readily exhausts the glands. The end result is a clean relatively dry nose and pharynx.

#### SUMMARY AND CONCLUSIONS.

1. Not sufficient thought has been given to the preparation for operation and the postoperative care in simple and complicated hare lip and cleft palate cases.

2. The profession should encourage early operation for the best result as to mortality and functional result.

3. The operator must insist on complete and careful preoperative examination of the patient.

(a) To eliminate systemic disease.

(b) To eliminate local pathology in the ear, nose and throat. (Over one-third of all cases in this series had this complication).

4. Age is not an important factor in the surgical result.

5. Success depends largely on the elimination of complications.

6. A period of observation before operation is desirable and necessary to good results.

7. A routine pre and postoperative treatment is imperative. This may be varied to meet complications with success.

8. Satisfactory means of antisepsis should be determined. Antiseptic astringent solutions have proved quite satisfactory.

9. The postoperative care by nurse and physician in charge plays a large part in the final result.

10. Partial and complete failures at repair require a prolonged period before a second attempt at operation.

I wish to acknowledge my indebtedness to Dr. C. J. Lyons for the privilege and encouragement of research in the material from his clinic.

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#### DISCUSSION.

DR. CHALMERS J. LYONS: I wish to compliment Dr. Baker upon his very valuable paper. It seems to me that it will be a very valuable contribution to the literature on cleft palate surgery. At the present time, as Dr. Baker has stated, there is very little written upon cleft palate surgery and much of the literature in vogue is not authentic.

There is one thing which I wish to emphasize and that is the best operative age. It seems that it does not make much difference how much we emphasize the best age of operation, we still find men operating for cleft palate who don't take into consideration the age. We get patients here who have been operated upon for cleft of soft palate in early infancy, that is, under twenty months. That is absolutely wrong. At such early ages there is little periosteum developed and we depend upon that for our flaps. Such surgeons have read that cleft palate should be operated upon early and they do it regardless of the condition. From the experience of most of the men doing this work, it is true that we must have these cases in early infancy if the hard palate is involved, for two or three reasons, namely, the maxillary processes can be formed by the thumb and finger and the operation can be done with very little shock to the patient. After the lip is closed the patient must be let alone and returned home until just before the patient begins to talk and then the operation for the closure of the soft palate should be made. There isn't any precedent for the successful operation of the soft palate before eighteen or twenty months and I wish the physicians over the state would understand that

that is the proper age for them to expect to get the best results.

We have found for the past few years that many times we would get small openings after the closure of the clefts and we have been trying to determine why these occurred, sometimes they are not larger than the diameter of a match, and at other times as large as a dime. We have been using a wire splint which has attached to it two lead plates for the purpose of splinting the muscular tissue. Recently we have determined that we could relax the palate sufficiently by two longitudinal incisions buccally to the blood supply of the palate, and our results so far have been very much better than those reported in this paper. We have not done enough yet to state whether that is the technic of choice or not, but I am satisfied that it is much better than attempting to use splints in the mouth allowing food particles to collect and thus causing infection. These longitudinal incisions differ from the old Langenbeck method in that they are made outside of the blood supply. In the old operation we have found that many of the partial failures were due to the lack of blood supply.

DR. HARRY M. MALEJAN: I think Dr. Lyons is to be congratulated upon his modification of the Brophy operation. Since the first of January we have been using this technic and we had fourteen cases of repair of the soft palate, and out of the fourteen cases there were twelve perfect results with normal palates when the patient left the Hospital. Of the two cases which failed, one patient had been operated on three times in a neighboring city and has at the present time an opening about the size of a dime. The second case was not a congenital cleft but a luetic cleft, and it sloughed away. I think there are three points in these operations for cleft palate, first, the preoperative treatment. In all such cases we have the tonsils and adenoids removed. This does away with most of the complications. In all of our last twelve cases we have not had any post-operative temperature. The second important point is the operative technic which Dr. Lyons has described. The third is the postoperative treatment. We have a hard time to get our work done properly because of the frequent changing of the nurses in the Hospital. Many of the staff members have to go and spray the mouths themselves. We use alphazone in 2 per cent. solution every two hours and 10 per cent. argyrol every four hours. This is not enough to cause gastrointestinal symptoms.

Our patients now are ready to leave the Hospital ten to fourteen days after the operation.

### CORRELATION OF THE ROENTGENOGRAPHIC AND SURGICAL FINDINGS IN SIXTY-TWO OPERATED CASES.

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Ever since we began the systematic examination of gastrointestinal conditions by the X-ray method we have insisted on conducting our

examinations in complete ignorance of the clinical or laboratory findings. There are several reasons for adopting this attitude. We recognize that a previous knowledge of the clinical side of the case must invariably influence the examiner, consciously or unconsciously; either he is liable to confirm the clinical diagnosis or he will assume an attitude of such scrupulous rectitude that he is in danger of "leaning over backwards" with similarly erroneous results. Moreover, we felt that the method is on trial and that, to prove its value, it must show conclusions independently. Incidentally, it left the final judgment in the hands of the clinician, where it properly belongs, putting no strain on the "*entente cordiale*" so necessary for the proper co-operation essential to a new department.

We believe that this principle has been justified, and when we came to cast up the reckoning, made some interesting observations that we believe will be of interest to you, especially since such unexpurgated reports are infrequent in the literature. The resulting "batting average" has been somewhat disappointing, and for our comfort we have added a study of the provisional diagnosis with which the patient reached us.

This series of cases covers a period of time during which 380 odd cases were examined. Of these, 62 were reported to us as operated and the operative findings returned. Undoubtedly a greater number of cases came to laparotomy, but the remainder returned to their home physicians or went elsewhere, and no reports are available. Of these 62 cases several had to be rejected because of incomplete data, incomplete examination, or the discovery of conditions not in the gastrointestinal tract. There remain then 56 cases in which a comparison of surgical and X-ray findings is possible.

These cases are arranged in tabular form. (Table 1). The surgical diagnosis is represented by vertical columns and the X-ray diagnosis follows horizontal lines. Each case has been given a letter or character so that its position in the table could be immediately identified and reference to the records simplified.

Such a classification naturally allows but one diagnosis for each case, and in the case of multiple diagnoses it was necessary to select the most important for tabulation. Moreover, every diagnosis on such a table carries the same weight, whereas the diagnostician speaks with varying degrees of conviction. For our purposes we have distinguished "major" and



“minor” conditions, depending on the probable priority or the relative importance in the production or symptoms. For instance, “adhesions” have always been assigned a minor value where a primary cause for the adhesions could be recognized with any degree of certainty. From our experience it would seem that quite as frequently as not they assume a major rôle in the production of symptoms. Other diffi-

X-ray diagnosis. In these shaded areas are found 26 out of a total of 56 cases, representing a percentage of about 47 per cent. as entirely correctly diagnosed. In the fourth line, representing the cases in which a diagnosis of “adhesions” was made, but the primary cause of the adhesions could not be determined, are found 12 additional cases. These diagnoses are not incorrect but incomplete, and frequently

TABLE 1.

X-RAY Diagnosis	CONDITIONS FOUND AT OPERATION						
	G—U	D—U	App	Adh	G—B	Car	Neg
Gastric Ulcer	6		A			w	
Ducdenal Ulcer		3		M Q			
Appendicitis			H Y d f u x				
Adhesions	L		E N Z e q v 4 r	W a c n 1 2 7	I j y		
Gall-Bladder		t	J g	P	B G h k S		
Carcinoma						K R i m s	
Diagnosis Impossible			U	o	V	S e	b
Negative			T X 5				
Miscellaneous			P		F		

culties constantly arose, and I trust you will pardon my very human weakness when I listed a case in which we had made a diagnosis of “appendicitis” and whom laparotomy disclosed had gall-stones and a peptic ulcer in addition, as a case of appendicitis.

On the table, a series of shaded rectangles running from the upper left hand corner diagonally downward and to the right represents an agreement between the surgical and the

adequate from the point of view of both the surgeon and the patient, since it led to a perfectly justified exploration. Including these increases the ratio to 38/56, or 67 per cent.

A further necessary classification, was the listing of six cases as “diagnosis impossible,” where it was realized that some pathology was present, but no conclusion as to its nature was justified. Inasmuch as this conclusion was of no assistance either to the surgeon or the pa-

tient, these must be considered as failures against the X-ray method of examination.

The greatest interest naturally attaches to the "misses," and the causes leading to a failure to reach a correct diagnosis. The detailed study of these 18 cases reveals so many interesting, and, in many ways, extenuating circumstances that I propose to briefly consider each one of them.

Considering the cases of proven gastric ulcer, we find "L" diagnosed "adhesions" by us. Our report reads: "We think we are justified in diagnosing adhesions in the right upper quadrant presumably due to duodenal ulcer, possibly to gastric ulcer." Operation revealed extensive adhesions and a small gastric ulcer.

In the duodenal ulcer column, case "t" was diagnosed "gallbladder disease" principally on the evidence of a shadow in the gallbladder region. Operation revealed a fistula between the gall-bladder and duodenum through which barium had found its way into the former, simulating gallstone. A liberal interpretation of the facts might justify our placing this case in the gallbladder column.

The appendicitis column is interesting. In all, 22 patients had their appendices removed "for cause;" only six of these had received the proper diagnosis. Eight additional cases were labeled "adhesions," a diagnosis not incorrect in the light of the operation, and not impossibly the major cause of the symptoms in several cases, but, none-the-less, incomplete.

Case "A" was called "benign obstruction, due to pyloric ulcer." Exploration disclosed the omentum attached to the upper surface of the liver, lying as a strong band across the pylorus and causing obstruction. When this was severed, a mass was felt posterior to the stomach which could not be exposed. A ++++ Wassermann further complicated the picture. The temptation to include this case in the gastric ulcer column is very great.

In the cases "J" and "g" the error of interpreting the shadow of a full gallbladder as indicative of pathology, following the contention of Dr. George of Boston, led us astray. One of these cases also gave a history of an appendectomy three years previously.

Case "r" needs some comment. The diagnosis here was "adhesions;" a perisplenitis with adhesions and infarcts was discovered, and incidentally the appendix removed. The pathologic report is "chronic obliterative appendicitis."

Case "U" led to the report "no diagnosis pos-

sible;" "the appendix was found long, congested, nearly snared off at one point; right kidney contracted, thickened, irregular lower pole. Appendectomy. Pathologic report; chronic obliterative appendicitis." "Result, 10 weeks later, some pain over the left kidney; worse at night; otherwise well."

The three cases in which no pathology was indicated by the barium meal have no redeeming features.

"T" had an appendix removed and no other pathology noted at operation; the pathologist reported "fecal concretion, old inflammation." But the autopsy disclosed "Primary carcinoma of the cervix, (medullary), metastases in the retroperitoneal glands, adrenals, kidneys, lungs and bone marrow. Chronic parenchymatous nephritis, chronic diphtheritic cystitis, beginning gangrene. Old fibroid salpingitis."

"X" is quite as disconcerting. The surgical notes read, "A band of omental adhesions extending from the transverse colon to the anterior abdominal wall; freed. Appendix retrocecal in a mass of adhesions, buried and sharply kinked, constricted at center, terminal half congested and swollen: appendectomy." The pathologist says, "Appendix negative." The X-ray report specifically notes the free mobility of the cecum in spite of the adhesions found at operation.

In "5" the appendix was free but obliterating and the draining lymph glands were enlarged. The X-ray examination held no suggestion of functional or morphological abnormality.

"p" represents a "flight of fancy." We discovered a mass distorting the duodenum and fixing the transverse colon. It proved to be a mass of fat. The indications of a really vicious appendix were entirely overlooked.

"Under "adhesions" are grouped those cases in which no obvious cause or excuse for the occurrence of inflammatory adhesions could be discovered at a thorough exploratory laparotomy. The majority are doubtless of such origin, although developmental bands and folds are well recognized causes of trouble.

Of these "M" and "Q" are very similar. In both duodenal ulcer was diagnosed from the deformity of the duodenal shadow; in both the distortion was due to a band of omental adhesions crossing the stomach and duodenum and attached to the superior surface of the liver. In both cases the findings were so typical of ulcer that a similar error must result from the examination.

"P" was diagnosed "gallbladder disease" on



the evidence of adhesions about the hepatic flexure and some deformity of the antral end of the stomach. The surgical notes cite "adhesions between the gallbladder and the hepatic flexure of the colon, \* \* \* gallbladder normal, \* \* \* Lane's kink, \* \* \* uterus adherent to the anterior abdominal wall." The question might be raised whether the gallbladder could be considered normal under the circumstances.

"o" represents a wide discrepancy between the X-ray findings and the amount of the pathology discovered. The upper abdomen was filled with a mass of adhesions binding the stomach, duodenum, and gallbladder together and to the anterior abdominal wall. The X-ray

In the disturbed condition of our knowledge of the X-ray diagnosis of gallbladder disease, the G-B division presents an agreeable surprise. In "V" the displacement and disturbance of a mass in the right upper quadrant was recognized but its nature could not be determined. It proved to be inflammatory and two stones were recovered. In "F" a large hepatic mass was diagnosed which proved to be secondary to an old gallbladder disease.

The carcinoma division is less satisfactory. Malignancy of the stomach is usually conceded to be diagnosed with greater certainty by the X-ray than any other abdominal condition. We succeeded only five times out of eight chances.

TABLE 2.

Medical Diagnosis	CONDITIONS FOUND AT OPERATION					
	G—U	D—U	App	Adh	G—B	CAr
Gastric Ulcer	6		A D			l
Ducdenal Ulcer		t 3	E Z	Q W n 7	j	w
Appendicitis			U F u v x 45			
Adhesions			T p r	a 1 2		
Gall-Bladder			J X g	p	E G V n k 8	
Carcinoma			e		I y	DRK m i s z

notes read, "9 o'clock plates are negative except for a rather curious deformity in the prepyloric region and a poorly filled cap. This looks more like traction deformity than that due to ulcer, from the fact that it is quite smooth in outline and shows a distinct angulation of the axis of the canal. However, there is little evidence to support the idea of traction and adhesions, the motility of the stomach, small bowel, and large gut being normal throughout, the hepatic flexure being easily separated, and there being no distention of the ascendans; nor do we think these findings justify a diagnosis of ulcer. We find a more definite diagnosis impossible."

"w" represents the malignant degeneration of a gastric ulcer in a very young man, and the malignant nature was not recognized. This also is an excusable error.

"S" is a more serious error. A careful review of the fluoroscopic notes and the plates fails to reveal any evidence of neoplasm. "I" was complicated by extensive adhesions about the pylorus, grossly deforming the stomach shadow, in which the characteristic defect of a carcinoma of the fundus was missed. A review of the plates demonstrates the evidence was there but was overlooked.

Finally "b" is interesting as a case reported by us as "diagnosis impossible, virtually nor-

mal." The doubtful appendix was removed because no other pathology was found.

For purposes of comparison, I have prepared a similar table (Table 2) of the "provisional diagnosis" with which these cases reached me as compared with the surgical findings. It is freely admitted that this is eminently unfair to the referring physician, since many of these are based on very hasty and superficial examination, the careful clinical examination being carried on at the same time as the roentgenologic examination. Nevertheless, it will serve to give us a basis for argument. This series is shorter than the previous one because the provisional diagnosis is not always given in the record. In many cases the diagnoses are multiple, and the first diagnosis given has been assumed to be the first choice, although the range is sometimes so great as to suggest there was little choice in the mind of the referring agent.

Although a detailed discussion of this table is not justified by the facts and would take too much time, I wish to call attention to a few outstanding facts that seem to me significant.

Gastric ulcer was found but once; it was diagnosed four times. Twice we were in agreement; in "6," which was correct, and in "A" which was incorrect as has been discussed before. Case "1" is probably a legitimate "miss," the condition probably being primarily an ulcer.

Duodenal ulcer was found twice; and diagnosed ten times. Four of these errors belong in the adhesion column, and two more were so placed by us. "w" is also a legitimate error. These cases demonstrate clearly the similarity of the symptoms and the functional disturbances caused by these two conditions.

Appendicitis was diagnosed seven times out of eighteen, but it was never wrongly diagnosed. The error here is on the side of "conservatism." Curiously the two tables are in agreement in only three cases, two having been referred by the Department of Gynecology; and one by the Surgeons; in fact only two correctly diagnosed cases of appendicitis came from the Internist. Neurology has a perfect score, 1/1.

In the matter of adhesions the ratio is somewhat better, three cases out of eight. But each of these three cases had a history of previous laparotomies, and the diagnoses were obvious.

The clinical record on gallbladder disease is distinctly creditable; out of nine cases six were correctly diagnosed. "j" was complicated with rather extensive adhesions, in "T" the surgeons

frankly entertained the possibility of malignancy, as the internists opined, while in "y" we have only the simple statement of the surgeon "gallstones." This diagnosis was made four times when other conditions were found.

Practically all the cases of carcinoma were properly classified; the two exceptions, "1," and "w" evidently being cases of "malignant degenerations" of peptic ulcers, and there is much to be said in extenuation of the diagnoses in cases "e," "I," and "y."

In a general way we may sum up the tendencies of the two methods by noting that the clinician is prone to place the lesion too high in the G-I tract, that is, to confuse reflex neuroses with organic conditions, and this is particularly true in the cases of appendicitis and adhesions, while the X-ray method, as conducted here, is likely to fail from insufficient evidence, as well as to go astray after the will-o-the-wisp of some striking feature of very minor import. This, presumably, is a hang-over from the days when the roentgenologist expected to make his diagnoses on purely empirical signs and "complexes."

Where a hollow viscus can be completely filled with an opaque material, we may study its size, shape, position and, to some extent, its function. This, however, is possible only with the stomach, cap and colon. The former may be very satisfactorily studied by this method; the latter is normally so diversified in shape that minor changes in shape representing serious changes in function may entirely escape notice. It is rather remarkable to see the relatively small changes in the contour of the large bowel produced by massive adhesions. The remainder of the G-I tract is not open to this method at best, and we are forced to rely on the observed changes of function, especially that of motility. This is done by watching the progress of the opaque meal at various intervals and comparing the clearance time with the standards established by similar observations on the normal. The abnormalities so observed may profitably be studied in the light of the operative findings.

The normal stomach should be clear of the test barium meal in six hours. If a residue remains after an interval of six hours it is held to be pathologic and an attempt is made to estimate the size of the residue in ounces as a measure of the altered function. The distribution of this finding with reference to the surgical findings is shown in this table.



TABLE 3.  
SIX HOUR GASTRIC RESIDUE.

	Ratio	Per cent.
Gastric Ulcer .....	1/4(?)	25(?)
Duodenal Ulcer .....	0/3	0
Appendicitis .....	9/26	34
Adhesions .....	15/35	42
Gallbladder Disease.....	6/12	50
Carcinoma .....	9/9	100

It should be noted that these ratios are calculated on the total number of times a given condition occurred. For instance, the total number showing adhesions was 35 of which 15 showed a six hour residue, but there were only 10 cases in which the adhesions were the only pathology found, and only three of these produced a residue. The ratio more properly should read 3/10 or 30 per cent. The revised table reads:

TABLE 4.  
SIX HOUR RESIDUE (Major Diagnoses).

	Ratio	Per cent.
Gastric Ulcer .....	1/2(?)	50(?)
Duodenal Ulcer .....	0	0
Appendicitis .....	9/25	36
Adhesions .....	3/10	30
Gallbladder Disease .....	6/10	60
Carcinoma .....	9/9	100

The striking feature of this table is the relative frequency of this gastric finding in conditions not primarily gastric. The same feature is brought out in the observations at longer intervals, as follows:

TABLE 5.  
GASTRIC RESIDUE. (Total Number of Cases).

	12 Hr.		24 Hr.	
Gastric Ulcer .....	1/4(?)		1/4(?)	
Duodenal Ulcer .....	0		0	
Appendicitis .....	2/26	8%	1/26	4%
Adhesions .....	1/35	3%	0	
Gallbladder Disease ..	0		0	
Carcinoma .....	6/9	66%	?	

The single case of gastric ulcer that appears in each of these tables and shows a high degree of gastric retention properly should be classified as "pyloric ulcer," a condition producing an entirely different X-ray picture and which possibly may show characteristic clinical features.

A gastric residue then occurs in many conditions besides gastric disease; in fact, it is rather noteworthy that, with the exception of carcinoma, gastric residue is the exception, while so high a degree of gastric retention as a 24 hour residue may occur in chronic appendicitis.

According to our standards, the ileum should be cleared in 12 hours. The following table shows the conditions in which such clearance failed:

TABLE 6.  
TWELVE HOUR RESIDUE. (Ileal).

	Ratio	Per cent.
Gastric Ulcer .....	1/2	50
Duodenal Ulcer .....	1/1(?)	?
Appendicitis .....	14/25	56
Adhesions .....	6/10	60
Gallbladder Disease .....	7/10	70
Carcinoma .....	3/9(?)	?

This table must be considered in the light of the clearance time of the stomach, since the small bowel can scarcely be expected to clear until a stated time after it has received all of the gastric contents. So the cases of carcinoma should logically be excluded from this table, while the cases of peptic ulcer were associated with such extensive adhesions that, from a functional point of view, this condition was predominant. Practically every case that is left was associated with more or less extensive adhesions, and probably this is the determining condition, for we find ileal residue in 23/35 cases having adhesions of any sort or in 66 per cent. of cases.

Ordinarily the upper small bowel is empty during the later stages of digestion or contains only inconsiderable amounts of opaque material. A definite shadow in the region of the jejunum is pathologic and has been named a "high residue." It does not necessarily depend on a gastric residue. Its incidence is shown in the following table:

TABLE 7.  
HIGH RESIDUE.

	Ratio	Per cent.
Gastric Ulcer .....	0	0
Duodenal Ulcer .....	0	0
Appendicitis .....	11/25	44
Adhesions .....	5/10	50
Gallbladder Disease .....	3/10	30
Carcinoma .....	1(?)	?

We consider it significant that no cases of peptic ulcer are included in this table. Just why certain cases should show this sign and others not, is not at all clear. We have supposed that the active inflammatory processes were more apt to show this finding but recently we have seen several cases that seem to contradict this hypothesis.

Another sign of some import is the so-called "secretion zone." This is indicative of a fluid secretion in the resting stomach, (12 hours after a meal) and was at one time considered pathognomonic of peptic ulcer. Its incidence is as follows:

TABLE 8.  
SECRETION ZONE.

	Ratio	Per cent.
Gastric Ulcer .....	1/4	25
Duodenal Ulcer .....	2/3	66
Appendicitis .....	2/25	8
Adhesions .....	0	0
Gallbladder Disease .....	0	0
Carcinoma .....	?	?

In the course of this study we have tabulated a number of other signs singly and in combination, and the pattern of the fabric is not yet so clear that it may be appreciated by the casual observer. I will mention only one more because of its clinical interest. Where we have found a definite tenderness in the right iliac fossa, over the appendiceal shadow, we have so noted it in our protocols. The incidence of this finding follows:

TABLE 9.  
RIGHT ILIAC TENDERNES.

	Ratio	Per cent.
Gastric Ulcer .....	0	0
Duodenal Ulcer .....	0	0
Appendicitis .....	6/25	24
Adhesions .....	1/10	10
Gallbladder Disease .....	4/10	40
Carcinoma .....	0	0

These results are rather disconcerting to the clinician, but we can find no error in the observation. Nor is an adequate explanation at hand.

From this rapid survey, it appears that we are far from having any pathognomonic signs in roentgenology, and that the diagnosis must be made by careful correlation of many observations quite as in any other diagnostic method. More significant is the fact that many signs are common to unlike conditions, and if we seek a common cause, we can find none except the ubiquitous adhesion. If we assume that adhesions produce these abnormalities of function, it is quite as logical to assume that they also in part, and not unlikely, in large part, produce the symptoms and complaints. This satisfactorily explains the difficulty of recognizing the conditions clinically. It also explains the change that often occurs (in the character and the severity of the symptoms) with greater chronicity, a principle that is recognized and considered when the clinician attaches the greatest importance to the history of the first attack.

By what mechanism these abnormalities of function are produced, whether by mechanical obstruction, or by reflex neuromuscular and neuroglandular action, is one of the most urgent problems confronting the gastroenterologist of today. That the mechanism is not always

the same is indicated by the variation in the combinations and the relative severities of these more easily recognized signs. We know perfectly well that extensive adhesions may exist without symptoms, while, on the other hand, apparently very inadequate adhesions are associated with, (and may be the cause of) serious trouble. What are the factors that determine these relations? Is it the position of the adhesion with relation to the parietal peritoneum? traction on the mesentery, on the omentum, the fixation of the small bowels? interference of either of its movements, peristalsis or with relation to the other abdominal contents? or does it depend on the irritation of an inflammatory process?

These are some of the questions that are suggested by this short series of cases. They are problems that confront us daily. They interest not only the roentgenologist but every one dealing with gastrointestinal conditions. And to us they do not seem impossible of some sort of approximate solution. Unfortunately, with our present organization, it seems beyond the reach of this department. For, even with the present excellent co-operation with the Department of Surgery, we are conceding several basic assumptions. We have to assume that any anatomic changes found by the surgeon represent in truth the causative pathology, we assume that the pathologist is able to distinguish between those changes that produce trouble and those that do not, e. g., in an appendix, or assume that, when the surgeon corrects what trouble he finds, the trouble will disappear and the patient will be well. This is not said in criticism of any department, but is simply a statement of a criticism that would justly lie against the work represented here irrespective of the number of the cases presented or the thoroughness of the correlation.

Let me illustrate by a specific example not included in the series tabulated. A graduate nurse was referred to me with a vague gastric complaint and a dread of gastric carcinoma. She had about reached the menopause and the referring physician considered all her troubles climacteric. He was very certain that I would find nothing significant. On my part, I found nothing in the least suggestive of any alteration of the digestive function, but did find seven large calcareous gallstones. There was no evidence of functional disturbance from these stones, they had probably been there a number of years, there was plenty of room in her abdomen to carry them without crowding, there-



was no history of the usual or unusual episodes of gallbladder disease, nevertheless the surgeon (not in this Hospital) unhesitatingly and with considerable enthusiasm removed them and verified my count. But the patient is no better.

On paper this ease is a signal triumph for the Department of Roentgenology. But is it?

Medicine took a long step in advance when it followed its cases into the autopsy room. That may do very well for medicine or neurology but it does not satisfy the surgeon. He is his own pathologist. His value as a surgeon depends largely on his knowledge of gross pathology. And he studies his gross pathology, not with a final and conclusive eye, but from a constructive viewpoint. He is also his own "experimental physiologist" and "vivisectionist." His interest does not end in the operating room, nor with the convalescence of the patient, but can and should go one step farther and follow his patients to their old environments and see what the results of his efforts have been. This the man in a limited private practice can not escape for he sees his result constantly with varying emotions. But in a large reference clinic, this is not always done, and the surgeon loses the opportunity to scrutinize the reasons he had for doing what he did, excellent reasons doubtless, but not necessarily the best reasons. And so he runs the risk of doing the same things for the same reasons, and teaching others the same lines of reasoning to similar dubious conclusions. The conclusions are undoubtedly more often right than wrong, but he is placed in a position of not being able to prove it.

Without a good "follow-up system" we can not escape the force of this criticism.

We have stated some of our problems. We need answers to all of them and to many more that have not been stated. To be sure, we have "hunches" on several of them, they form our stock in trade and serve as the basis of our efforts to interpret our findings, but they rest on too slender evidence to justify their publication in the Transactions of this Society. Our purpose is not to dispose of these questions but to state our position and arouse your interest.

Nor does this summary of 62 cases give a correct idea of the value of the radiographic method of examination. The problems are essentially complex and their various factors can not be expressed in simple terms. And much useful information which does not in itself determine a diagnosis is added to the sum total of our knowledge of the case which can not be expressed in any "table."

We believe our "little bit helps" and that the clinician shares this view is shown by the steady growth of the number of cases referred to us for our opinion.

#### DISCUSSION.

DR. CYRENUS G. DARLING: The men in the clinical departments should appreciate Dr. VanZwaluwenburg's independent method of diagnosis in spite of his modest claims of success. They would probably compare very favorably with most of the clinical diagnoses if fully written and later tested by operation or postmortem.

In many cases the pathology found at operation is not always clear and not infrequently some of it is overlooked. The difficulties encountered in the study of adhesions are not surprising when one considers the many sources of origin and the possible deformities they may cause to the alimentary tract.

Any peritoneal inflammation may be followed by adhesions whether it arises from injury to the abdominal wall from without or an approaching perforation from within the abdominal organs.

The omentum in its protective capacity, attaches itself wherever needed and frequently remains at its post of duty long after the necessity has passed. Such an attachment may cause deformity of the stomach or any part of the alimentary tract by bands crossing the hepatic flexure of the colon. It may form a partial obstruction retarding the onward flow of the barium mixture and suggest the incompetent ileocecal valve.

The old appendicitis may have spread along the cecum to the underside of the liver making adhesions along the way which have remained while the appendix has recovered and assumed its normal form, provided the omentum did not take part in its protection.

Adhesions following operation are usually associated with the abdominal incision and omentum or gut involved to change the X-ray picture. Possibly these may retard the flow of the barium or even suggest an obstruction.

Probably no diseased organ in the abdomen presents such variations in size as the gallbladder and many of those cases giving the most pain and trouble are small and contracted, containing but one or few stones. These are deep under the liver and may also be covered by an inflamed mass of omentum as a protective agent. The single stone which frequently gives the best clinical history would be poor for X-ray diagnosis, again, a large full gallbladder may, by pressure, distort the position of surrounding organs, thus interfering with a correct X-ray reading.

The doctor appears best in his diagnosis of stomach and appendix changes because he has devoted more time to the study of these organs and they represent the beginning of a large percentage of the pathology of the abdomen. Beyond this, much of the pathology will be problematic unless the clinical history is carefully considered to give one direction.

I am sure that a further comparison of plates and findings will lead to greater accuracy in diagnosis both to the clinician and the roentgenologist.

DR. NELLIS B. FOSTER; A paper of this kind is of great use; it is a kind of clearing house that we all need now and then. It may show us up perhaps a little embarrassingly, but I am sure everyone working in a hospital gets an idea now and then that he is pretty good and to find out his real average is very good for him.

The diagnosis between gastric ulcer, gallstones and chronic appendicitis is one which every surgeon and internist of any experience recognizes as one that may be extremely difficult. It may not be always possible to say which one of those three is present. Further than the most careful examination, careful history and X-ray plates, we are not able to go. There is a certain element of satisfaction to be gotten out of the result which Dr. VanZwaluwenburg has shown us that may not appear on the surface. Only one case appeared as needing operation that should not have been operated upon. Granting that all of these cases of adhesions were benefited by operation, then all of the patients should have been either operated upon for therapeutic purposes or should have been explored with the idea of finding out if something could be done to help them. The thing which has puzzled me most since I have been in this clinic is the question of adhesions, and I am glad to know that it is bothering other people. Chronic appendicitis, as I see it here, is a new thing to me. I have been in the habit of going into the operating room and seeing my patients operated upon in the East. Cases with the extensive adhesions of the kinds that we see here are entirely new to me. Occasionally we did see such conditions following operation, but a majority of the cases which we see here have not been operated upon and we do not know the origin of the extensive peritonitis. It is one of the greatest difficulties to me to differentiate a chronic appendicitis, from these cases of adhesions. Probably they are primarily appendicitis with adhesions secondarily, as Dr. Darling has mentioned.

It is not surprising if one thinks of it, the difficulties which the X-ray Department finds in localizing pathologic processes. We know the number of conditions which can give rise to hyperacidity and we know that it is usually due simply to changes in motility in the stomach or reflex spasm in the pylorus—which is another way of saying a disturbance in the motility. Secretory changes are signs which we do not consider pathognomonic; not even in carcinoma. When you study the motor function upon which roentgenologists must depend principally for their interpretation, one meets with exactly the same nervous reflexes which one meets with in the

secretory disturbances. So that the difficulties are easily understood. How to overcome them, however, is another thing. I think that probably in the course of time we shall be able to make much more accurate diagnoses upon these cases than we do at the present time, by better methods both in clinical medicine and in the use of the X-ray. The most important condition perhaps from the point of view of its immediate recognition, that of carcinoma, seems to have been better recognized than most of the other conditions, and we shall get what grain of comfort we can out of that.

I think we are all very much indebted to Dr. Van Zwaluwenburg for his very frank exposition of this subject.

## REPORT OF A CASE OF TYPHOID SPINE.

WILLIAM H. GORDON, M.D.

House Physician, University Hospital, Ann Arbor, Michigan.

I report this case because it is one of the unusual complications of typhoid fever.

The patient, C. M., male, aged 21, American, single, sophomore literary student in the University of Michigan entered the University Hospital as an out-patient, December, 1916, with the complaint of pain in the lumbar region. This pain was so severe that he could not stand erect, and it was accentuated by the slightest movement.

The patient's father died of Bright's disease with cardiac complications. His mother died at 52, of Bright's disease. Four brothers and two sisters are living and in good health.

The patient has had the usual children's diseases with good recoveries. Since 1903 he has enjoyed good health. He denies lues and Neisser infection. He is a moderate drinker and uses tobacco.

The present illness began with an attack of typhoid fever August 24th, 1916. At this time the patient had a sick headache, which became worse daily. On the 29th he had pains in the abdomen which were not localized, diarrhea, and loss of appetite. He noticed that he had a fever on September 1st, and came to the University Hospital. At this time an examination revealed a much distended abdomen, seven to eight typical rose spots, palpable spleen but no enlarged glands. The Widal was positive with a 1-40 dilution in forty-five minutes. There



was a leucopenia of 6000, a temperature of 102 degrees and a positive diazo reaction on the urine. The patient was entered in the Contagious Ward of the University Hospital and was there from September 2nd to October 6th, 1916. During his stay he had the findings of a typical mild case of typhoid fever. The temperature reached its maximum at 104.0 degrees. After September 15th it never went over 100 degrees. At times during his illness he complained of pain in the lower lumbar region.

Upon his discharge from the Hospital, October 6th, the patient entered his second year as a student in the Literary College of the University of Michigan and proceeded to carry the regular work which is preliminary to the Freshman year in Medicine. At the same time he became careless in regard to himself and did too much outside work, supporting himself by playing at dances three to four hours twice a week.

About October 27th, he began to have pains in the right inguinal region. They were localized behind the anterior superior spine of the ileum, were deep seated and at the onset did not radiate in any direction. Gradually they became more severe and radiated around to the back at about the level of the third lumbar vertebra. About November 15th he had an abdominal examination; at that time the abdomen was everywhere soft, no muscle spasm was detected, and no tumor could be palpated. Over an area the size of the hand and localized about one-half way between the umbilicus and the anterior spine of the right ileum, there was tenderness, which was made more evident by flexing the flexed right lower extremity over the abdomen, and then extending the lower leg. The patient gave a history of having been constipated for a few days, and although the signs and symptoms of a typical case of appendicitis were not present he was directed to remain under observation for a few days and report any changes. From this time on the condition became worse. The patient says that the pain became more severe and at the same time he developed a stiffness of the back. He became weak and was unable to lift anything. Upon assuming the erect posture he had to support his back by pressure with his hand over the lumbar region and until he had fully straightened himself he would have severe pains in the

lower spine, which at times radiated around the lower back and abdomen and down the back of the leg. This condition became worse day by day and finally the whole back seemed to be sore especially on the right side. Also the pain, which at first was present only upon movement, became constant. He says he could not stand erect, that his body would lean forward and to the right, also that when he walked he had to make sure that he had each foot firmly upon the ground before taking another step.

Examination of the patient December 11th shows a marked limitation of all motion from the 7th cervical vertebra to the sacrum. All the motions of the spine are associated with marked pain, and upon palpation of the spine there is marked tenderness in the lumbar region over the 2nd to 5th lumbar vertebrae. The patient is unable to stand erect. His body is bent forward from the hip and a little to the right. Upon walking he places each foot carefully upon the floor before proceeding. He says that any jar causes great pain in the back. Upon questioning he says that he has had a marked constipation, which at times was replaced by diarrhea and vomiting.

X-ray examination shows a marked osteogenic proliferation of the right side of the bodies of the 3rd and 4th lumbar vertebrae, the intervertebral disc being primarily involved. A plaster dressing was applied to the back and the patient was sent home December 20th, 1916, and told to remain quiet, live on a forced diet and put himself under his family physician's care. While at home the patient developed an attack of acute enteritis with vomiting, diarrhea, abdominal pain, slight delirium and a temperature which reached 104.2 degrees. Upon removal of the plaster dressing the temperature returned to normal and the symptoms ceased. From this time, early in January, 1917, the patient remained quiet and as a result he improved so much that he entered the University again for the second semester in February. At this time the pain in the back had almost completely disappeared, there being very little limitation of movement. At the present time there is no deformity to be seen, no limitation of motion, and pain is elicited only upon exaggerated movement of the spine. There are no intestinal or abdominal symptoms.

The diagnosis of typhoid spine is made upon the following findings:

(1) History of a mild illness with typhoid fever. During this illness the patient complained of pains in the lumbar region.

(2) Symptoms of pain in the abdomen two months after convalescence from typhoid fever. These pains became more severe and finally became localized in the spine and especially in the 3rd and 4th lumbar vertebrae.

(3) Marked limitation of motion of the spine.

(4) Posture upon standing was that of the body bent forward upon the sacrum. Attitude upon walking was one of preventing any jar to the spine.

(5) The progressive character of the spinal disease which ceased and became retrogressive upon treatment.

(6) The X-ray findings were those of an osteogenetic proliferation and primary involvement of the intervertebral disc which is a characteristic picture of the condition found after typhoid and other fevers.

(7) The very short time required for the condition to respond to treatment.

The only other condition to be considered in this case is tuberculosis of the spine, or Pott's disease. This disease is ruled out by (1), (6) and (7).

I wish to thank Drs. Washburne, VanZwaluwenburg and Watton for the use of their findings in reporting this case.

#### DISCUSSION.

DR. HAROLD DEB. BARSS: This case illustrates clearly the need of careful routine examinations. When the patient first came to the Hospital for this spinal trouble, all his symptoms were referred to the front of the abdomen. We have found ourselves liable on a number of occasions to make a mistake believing that we were dealing with an abdominal condition, where primarily the disease is within the spine. Pressure upon the spinal roots will cause pain in the terminations of the spinal nerves and therefore we try to make the routine examination considering especially the spine in conditions of abdominal pain, because we have found ourselves on other occasions almost making an error. I think the diagnosis in this case is correct. Sometimes the diagnosis between Pott's disease and acute typhoid spine is almost impossible. Fortunately the treatment of the two conditions is the same and if one clears up readily under treatment we should believe that we are dealing with a typhoid spine rather than an acute Pott's. Fortunately deformity seldom takes place under treatment. I don't know the ultimate condition of the spine and I would like to see a radiogram of the spine after all the symptoms have disappeared.

DR. JAMES G. VANZWALUWENBURG: This is a rather unusual radiogram for typhoid spine. In this case we were fortunate in being able to make

the diagnosis of typhoid spine on the radiogram. As a general rule typhoid conditions of the bones are sharply localized and tend to an osteoplastic ulcer rather than an osteoclastic change, reconstructive rather than destructive. In the hard bones, such as the long bones, we may find small sharply localized abscesses which are fairly typical of typhoid fever. There is no other condition so sharply localized. Typhoid spine commonly involves the body of the centrum and is usually unilateral. This is unusual in that it involves the intervertebral disc. The osteoplastic changes are very well shown. I also should like to see by what process this pathology heals, whether by formation of a bony splint on the outside, or a return to the original condition.

DR. ROBERT H. BAKER: There is probably no other spondylitis other than tuberculosis which can come on with such acute onset as typhoid spine. In the history of this case we find that the patient one month after discharge from the Hospital developed symptoms which might have been interpreted as appendicitis. One month following that the X-ray was able to demonstrate very definite proliferation along the transverse processes which must have shown more or less calcification within the two months following his typhoid. It seems unlikely that any process could develop osseous formation within that time and be absorbed as typhoid spine is supposed to do. Osler classifies typhoid spine under three heads. One opinion is that it is almost entirely a neuropathic condition in which the symptoms are entirely neurotic, the clinical signs of fixation of the spine being almost totally absent. There is a second form in which the X-ray findings are almost negative and yet clinically temperature, nausea and vomiting are present. The final class which is probably a further stage of the second, presents definite spinal changes demonstrable by the X-ray. To me it seems unlikely that the spine which shows such widespread fixation and such local findings could be due entirely to typhoid. To me the X-ray findings of this patient at the time of his convalescence from typhoid would be much more interesting than those of the present date. I would like to know if he had any pathology of the spine to begin with.

DR. CYRENUS G. DARLING: I would like to ask Dr. Gordon if he considered the attack which the patient had at home as a possible second attack of typhoid fever.

DR. WILLIAM H. GORDON: This condition of acute enteritis which occurred after he went home I consider was a recurrence of his typhoid fever. I think that the patients who have the diagnosis of typhoid spine made should wear the jackets much longer than this jacket was worn, but when they get away from the doctor who is treating them it is sometimes impossible to have this treatment carried out.

I think we should consider many of the cases of acute abdominal pain which come in with the diagnosis of appendicitis, as conditions of the spine. I have found in the House Physician's Office that I have diagnosed appendicitis very often and the diagnosis has been changed to spondylitis, as a result of scarlet fever, typhoid fever or some other acute infection.



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*Editorials*

THE DANGERS OF SERVICE.

The following statement taken from the *Journal of the A.M.A.* will refute the many rumors and erroneous statements that have been made in regard to the mortality in the medical ranks during the war:

There has been such an astonishing amount of misinformation, exaggerated and sensational statements, published in this country regarding the casualties among medical officers in the British Army that Col. T. H. Goodwin of the British Army Medical Service, now in this country, cabled to the British War Office for the actual facts. He received the following data: The total casualties among medical officers of the British forces, on the western front, from the beginning of the war to June 23, were: killed, 195; wounded, 707; died of disease, 62. Hence the total number of casualties from actual war injuries on the western front was 902, of which 195 were in killed. This is entirely different from some of the statements which have received wide publicity in this country—some even semiofficial in character—which have reacted to the detriment of

the efforts to secure officers for the Medical Reserve Corps.

PATRIOTIC COMMITTEES.

From several County Societies we have received full remittance for the special assessment that was spread to create a Patriotic Fund. It is desired that every society make the effort to send their total amounts by September First.

County Secretaries are also requested to urge to the Chairman of Local Committees to promptly report the names of all their members who enter active service.

A little concentrated effort in each society will enable the Council to perfect its plans for the conservation of the practices of enlisted members.

UNPAID DUES.

In our last issue we published a list of members in arrears for dues. The list thus published **was not without error.** There were some names of deceased members, of whose death we have received no notice. Again there were names of men whose dues were paid and while credited were not removed from the list solely by clerical error, either in the office of the County Secretary or this office. These errors we believe now to be corrected and the list accurate. A number have become re-instated by the payment of their dues.

We tender our apologies to Dr. Hitchcock of Detroit whose name was published as delinquent by error of this office. Dr. Hitchcock's dues were paid in January, in fact his dues for years have been paid among the first. We regret the clerical error and are pleased to make amends.

Again we urge that county officers endeavor to secure re-instatement of the following delinquents:

ALPENA.

A. A. Stuart .....Lincoln  
John Wilson .....Spruce

ANTRIM, CHARLEVOIX, EMMET.

J. B. Brown .....Levering

W. H. Marshall .....Boyne City  
 R. R. Miller .....Harbor Springs  
 E. R. Moorman .....Pellston  
 W. H. Parks .....East Jordan  
 W. W. Walton .....Almira  
 R. H. Wessels .....Mancelona

## BARRY.

G. W. Lowry .....Hastings  
 S. C. McIntyre .....Woodland  
 J. W. Rigterink .....Freeport

## BAY.

C. W. Ash .....Bay City  
 S. L. Ballard .....Auburn  
 V. H. Dumont .....Bay City  
 Nina Ely .....Bay City  
 E. J. M. Flynn .....Bay City  
 H. M. Gale .....Bay City  
 J. A. Keho .....Bay City  
 R. McGeogh .....Bay City  
 J. McLurg .....Bay City  
 G. P. McNaughton .....Standish  
 G. E. Orth .....Linwood  
 F. H. Randall .....Bay City  
 R. E. Scrafford .....Bay City  
 A. F. Stone .....Bay City  
 Albert Stealey .....E. Tawas  
 C. M. Swantek .....Bay City  
 G. W. Trumble .....Bay City  
 V. L. Tupper .....Bay City  
 E. C. Warren .....Bay City  
 A. J. Zaremba .....Bay City

## BENZIE.

H. J. Kinne .....Frankfort  
 F. H. Stone .....Beulah

## BERRIEN.

R. B. Howard .....Three Oaks  
 D. D. J. Hays .....New Troy  
 A. A. Rosenberry .....Benton Harbor

## CALHOUN.

C. R. W. Southwick .....Olivet

## CASS.

All paid.

## CHEBOYGAN.

A. J. Sahs .....Cheboygan

## CHIPPEWA.

E. H. Campbell .....Newberry  
 A. McCandlass .....Sault Ste. Marie

## CLINTON.

Henry Cook .....Fowler  
 C. R. Keller .....Maple Rapids  
 E. L. Martin .....Maple Rapids

## DELTA.

G. C. Bartley .....Escanaba  
 M. P. Fenelon .....Escanaba  
 W. A. Lemire .....Escanaba  
 Louis Treiber .....Bark River  
 E. R. Wescott .....Spalding

## DICKINSON-IRON.

J. A. Crowell .....Iron Mountain  
 A. M. Darling .....Crystal Falls  
 M. F. Dockery .....Sagola  
 J. O. P. Edwards .....Alpha  
 R. E. Hayes .....Channing  
 C. F. Larson .....Crystal Falls  
 E. M. LiLbby .....Iron River  
 W. McBurney .....Stambaugh  
 E. B. McDaniel .....Crystal Falls  
 A. A. Metcalf .....Crystal Falls  
 W. S. Stevens .....Iron River

## EATON.

J. B. Bradley .....Eaton Rapids  
 H. W. Kenfield .....Mulliken  
 C. L. McLaughlin .....Vermontville  
 W. H. Rand .....Charlotte  
 J. T. Warford .....Mulliken

## GENESEE.

A. B. Clark .....Swartz Creek  
 A. R. Ingram .....Fenton  
 B. G. McGarry .....Fenton  
 J. W. Parker .....Grand Blanc  
 J. R. Shank .....Flint  
 J. D. Stuart .....Flint  
 H. R. Thomas .....Flint

## GOGEBIC.

All paid.

## GRAND GRAVERSE, LELANAU.

F. C. Mayne .....Traverse City  
 W. M. Payne .....Suttons Bay

## GRATIOT, ISABELLE, CLARE.

J. S. Bender .....Bannister  
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 A. T. Gretchell .....Mt. Pleasant  
 D. M. Langan .....Harrison  
 F. C. Sanford .....Clare  
 W. A. Sayers .....Mt. Pleasant  
 J. R. Shaffer .....Elm Hall  
 F. C. Thornburgh .....Alma

## HILLSDALE.

W. R. Ditmars .....No. Adams  
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## HOUGHTON.

J. C. Abrams .....Calumet  
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S. Stevens ..... Uby

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J. C. Fleming .....Pewamo  
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 F. W. Martin .....Portland

## INGHAM.

C. M. Davis .....Lansing  
 F. H. Harris .....Lansing  
 J. B. Park .....Okemos

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Ferdinand Cox .....Horton  
 H. G. Glover .....Jackson  
 W. M. Lake .....Grass Lake  
 A. R. Williams .....Jackson

## KALAMAZOO.

B. T. Butler .....Kalamazoo  
 F. A. Butterfield .....Lawrence  
 J. F. Chapin .....Schoolcraft  
 L. E. Clark .....Otsego  
 R. N. Dunnington .....Hartford  
 A. H. Gifford .....Alamo  
 A. M. Hutton .....Oshtemo  
 B. H. Southworth .....Schoolcraft  
 Howard Stuck .....Allegan

## KENT.

W. S. Bell .....Grand Rapids  
 H. M. Blackburn .....Grand Rapids  
 R. C. Breece .....Ada  
 J. Buersma .....Grand Rapids  
 H. W. Dingman .....Grand Rapids  
 C. H. Fairbanks .....Grand Rapids  
 J. A. Heasley .....Grand Rapids  
 Jas. Henry, Jr. ....Grand Rapids  
 J. B. Hilliker .....Grand Rapids  
 C. E. Hooker .....Grand Rapids  
 W. A. Hyland .....Grand Rapids  
 R. J. Kirkland .....Grand Rapids  
 M. A. Leach .....Grand Rapids  
 A. M. Martin .....Grand Rapids  
 R. Maurits .....Grand Rapids  
 P. S. Miller .....Grand Rapids  
 C. A. Moon .....Grand Rapids  
 C. C. Slemons .....Grand Rapids  
 G. J. Stuart .....Grand Rapids  
 S. D. Swantek .....Grand Rapids  
 R. T. Urquhart .....Grand Rapids

## LAPEER.

Paul Thompson .....Lapeer

## LENAWEE.

A. W. Chase .....Adrian  
 W. T. Clenns .....Blissfield  
 R. A. Davis .....Clinton  
 C. C. Hyde .....Addison  
 E. T. Morden .....Adrian  
 R. H. Nelson .....Hudson  
 L. G. North .....Tecumseh  
 O. N. Rice .....Tipton

## LIVINGSTON.

E. B. Pierce .....Howell  
 J. D. Singer .....Brighton  
 W. J. Wright .....Gregory

## MACOMB.

H. G. Berry .....Mt. Clemens  
 W. F. Lungerhausen .....Mt. Clemens  
 C. M. Mann .....Halfway  
 J. F. O'Keefe .....Mt. Clemens  
 A. A. Parisot .....Mt. Clemens  
 J. H. Seaman .....New Haven  
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 A. J. Warren .....Mt. Clemens  
 V. H. Wolfson .....Mt. Clemens

## MANISTEE.

S. H. Cornell .....Copemish

## MARQUETTE-ALGER.

R. S. Buckand .....Baraga  
 H. M. Cunningham .....Marquette  
 C. J. Larson .....Negaunee  
 H. A. Sharpe .....L'Anse  
 T. J. Wilson .....Palmer

## MASON.

J. H. Carnelly .....Ludington  
 I. L. Hunt .....Scottville  
 E. J. Kirwan .....Ludington  
 F. McCandless .....Ludington

## MECOSTA.

R. P. Allen .....Remus

## MENOMINEE.

B. W. Jones .....Vulcan  
 L. W. Palmer .....Hermansville

## MIDLAND.

All paid.

## MONROE.

All paid:

## MONTCALM.

V. H. Hargrave .....Carson City

## MUSKEGON-OCEANA.

All paid.

## NEWAYGO.

W. C. Tompsett .....Hesperia

## OAKLAND.

G. F. Hamlen .....Rochester

B. H. Spencer .....Rochester

## O.M.C.O.R.O.

J. H. Abblett .....Fairview

## ONTONAGON.

All paid.

## OSCEOLA, LAKE.

All paid.

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W. J. Vandenberg .....Holland

A. Vander Veen .....Grand Haven

W. S. Walkley .....Grand Haven

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L. C. Kent .....Onaway

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R. B. Bennett .....Brant

W. A. DeFoe .....Saginaw

A. R. Ernst .....Saginaw

G. H. Ferguson .....Saginaw

J. J. Fitzgerald .....Saginaw

R. O. Fuerbringer .....Saginaw

Arthur Grigg .....Saginaw

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M. D. Ryan .....Saginaw

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L. B. Stewart .....Chesaning

C. S. Watson .....Saginaw

R. S. Watson .....Saginaw

T. M. Williamson .....Saginaw

P. S. Windham .....Saginaw

## SANILAC.

All paid.

## SCHOOLCRAFT.

All paid.

## SHIAWASSEE.

A. L. Arnold .....Owosso

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P. S. Willson .....Owosso

## ST. CLAIR.

C. A. McPherson .....St. Clair

E. P. Tibbals .....Port Huron

## ST. JOSEPH.

Ray E. Dean .....Three Rivers

P. L. Hartman .....Colon

D. M. Kane .....Sturgis

J. H. Moe .....Sturgis

F. W. Robinson .....Sturgis

A. A. Wade .....Howe, Ind.

## TRI COUNTY.

E. S. Niehardt .....So. Boardman

## TUSCOLA.

J. E. Handy .....Caro

H. H. King .....Colling

I. D. McCoy .....Cass City

L. M. Ryan .....Caro

W. A. Wellemeyers .....Vassar

## WASHTENAW.

J. R. Breakey .....Ypsilanti

H. W. Emerson .....Ann Arbor

Q. O. Gilbert .....Ann Arbor

H. H. Johnson .....Ypsilanti

W. A. Kloppenstein .....Manchester

I. D. Loree .....Ann Arbor

F. F. Pyle .....Milan

A. S. Warthin .....Ann Arbor

C. L. Washburne .....Ann Arbor

## WAYNE.

Jos. Aarons .....Detroit

C. G. Anderson .....Detroit

W. R. Baker, .....Detroit

V. D. Barnes .....Detroit

G. C. Bassett .....Detroit

R. Beattie .....Detroit

C. C. Benjamin .....Detroit

A. E. Bernstein .....Detroit

John Blake .....Detroit

A. C. Blakeley .....Detroit

T. F. Brady .....Detroit

J. N. E. Brown .....Detroit

A. E. Bryant .....Detroit

G. B. Bulson .....Detroit

G. Bundy .....Detroit

J. E. Burgess .....Detroit



F. B. Burke .....	Detroit	M. A. Layton .....	Detroit
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F. F. Corbett .....	Detroit	G. H. McMahon .....	Detroit
C. G. Crumrine .....	Detroit	W. M. Manton .....	Detroit
R. F. DeBlois .....	Detroit	N. J. Mallory .....	Detroit
V. C. Doherty .....	Detroit	E. S. Martin .....	Detroit
L. J. Dretzka .....	Detroit	A. Metzner .....	Detroit
M. S. Dubpernell .....	Detroit	W. E. Miller .....	Detroit
F. Duffield .....	Detroit	E. T. Milligan .....	Detroit
G. C. Duggan .....	Detroit	A. R. Moon .....	Detroit
E. W. Eede .....	Detroit	C. W. Morey .....	Detroit
A. Fellman .....	Detroit	P. F. Morse .....	Detroit
W. A. Fenner .....	Detroit	J. W. Neary .....	Detroit
G. H. Fielder .....	Detroit	H. E. Northrup .....	Detroit
L. R. Fitzgerald .....	Detroit	E. J. O'Brien .....	Detroit
O. A. Fischer .....	Detroit	T. H. O'Rourke .....	Detroit
C. A. Fisher .....	Detroit	Howard Osborn .....	Detroit
N. M. K. Fisk .....	Detroit	E. J. Panzner .....	Detroit
O. C. Fluemer .....	Detroit	E. Rood .....	Detroit
H. E. Fogt .....	Detroit	F. D. Royce .....	Detroit
L. Galton .....	Detroit	W. D. Ryan .....	Detroit
I. S. Gellert .....	Detroit	J. W. Schureman .....	Detroit
D. L. Gordon .....	Detroit	Eugene Smith, Jr. ....	Detroit
A. H. Gorenflo .....	Detroit	A. M. Stirling .....	Detroit
H. W. Green .....	Detroit	J. D. Stuart .....	Detroit
A. J. Griffith .....	Detroit	Alexander Thomas .....	Detroit
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R. J. Hamlen .....	Detroit	T. Walker .....	Detroit
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A. E. Harris .....	Detroit	W. R. Henderson .....	Detroit
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L. T. Henderson .....	Detroit		
Thos. Henderson .....	Detroit		
L. H. Herbert .....	Detroit		
A. M. Humber .....	Detroit		
W. H. Hutchings .....	Detroit		
F. W. Hyde .....	Detroit		
E. B. Keeler .....	Detroit		
J. B. Kennedy .....	Detroit		
W. Y. Kennedy .....	Detroit		
J. A. Kinsey .....	Detroit		
A. W. Kipp .....	Detroit		
M. E. Kohn .....	Detroit		
E. P. Koneczny .....	Detroit		
S. A. Kulick .....	Detroit		
P. A. Klebba .....	Detroit		
W. C. Lambert .....	Detroit		
W. P. Lane .....	Detroit		
T. M. Lawton .....	Detroit		

#### PATRIOTIC COMMITTEES.

We have received notices of County Societies appointment of the appended list of local Patriotic Committees. Many of our societies have been derelict in the matter. We urge that these Committees be appointed this month and notice sent to the State Secretary:

#### ALPENA.

Dr. D. A. Cameron, Chairman .....Alpena  
 Dr. E. E. McKnight .....Alpena  
 Dr. D. A. Dunlop .....Alpena

#### BERRIEN.

Dr. C. N. Sowers, Chairman .....Benton Harbor

Dr. W. T. Bertrand ..... Coloma  
 Dr. H. G. Bartlett ..... St. Joseph  
 Dr. B. D. Giddings ..... Niles  
 Dr. R. B. Howard ..... Three Oakes

## BRANCH.

Dr. D. H. Wood, Chairman ..... Coldwater  
 Dr. P. H. Gunsallus ..... Bronson  
 Dr. E. E. Hancock ..... Union City  
 Ray Whitmore ..... Quincy  
 S. Schultz ..... Coldwater

## CALHOUN.

Dr. W. L. Godfrey, Chairman..... Battle Creek  
 Dr. E. L. Parmeter ..... Albion  
 Dr. W. H. Haughey ..... Battle Creek  
 Dr. R. V. Gallagher ..... Battle Creek  
 Dr. C. E. Stewart ..... Battle Creek San.

## CHIPPEWA.

Dr. Robert Benne ..... Sault Ste. Marie  
 Dr. I. V. Yale ..... Sault Ste. Marie  
 Dr. J. A. Ferguson ..... Sault Ste. Marie

## GENESEE.

Dr. J. W. Handy ..... Flint  
 Dr. H. R. Niles ..... Flint  
 Dr. F. W. Tupper ..... Flint  
 Dr. R. E. Burwell ..... Flint  
 Dr. A. S. Wheelock ..... Goodrich

## HURON.

Dr. W. J. Herrington, Chairman ..... Bad Axe

## IONIA.

Dr. E. F. Beckwith ..... Ionia  
 Dr. F. M. Marsh ..... Ionia  
 Dr. J. J. McCann ..... Ionia

## KENT.

Dr. B. R. Corbus, Chairman ..... Grand Rapids

## KALAMAZOO.

Dr. L. H. Stewart, Chairman ..... Kalamazoo  
 Dr. F. H. Tyler ..... Kalamazoo  
 Dr. A. H. Rockwell ..... Kalamazoo  
 Dr. C. L. Bennett ..... Gobles  
 Dr. A. L. Van Horn ..... Otsego

## MUSKEGON, OCEANA.

Dr. I. M. J. Hotvedt, Chairman ..... Muskegon  
 Dr. J. T. Cramer ..... Muskegon  
 Dr. A. F. Harrington ..... Muskegon

## SANILAC.

Dr. C. G. Robertson, Chairman ..... Sandusky  
 Dr. H. H. Leavenworth ..... Crosswell  
 Dr. J. F. Waltz ..... Brown City

## SHIAWASSEE.

Dr. A. M. Hume, Chairman ..... Owosso

## ST. CLAIR.

Dr. M. Willson, Chairman ..... Port Huron  
 Dr. W. G. Wight ..... Yale  
 Dr. W. H. Smith ..... St. Clair  
 Dr. C. C. Clancy ..... Port Huron  
 Dr. C. B. Stockwell ..... Port Huron

## WAYNE.

Dr. J. N. Bell, Chairman ..... Detroit  
 Dr. W. J. Wilson ..... Detroit  
 Dr. Wm. Donald ..... Detroit  
 Dr. J. E. Davis ..... Detroit  
 Dr. S. Knight ..... Detroit

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## Editorial Comments

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From time to time we have directed attention to our advertisers. We are compelled to again reiterate the necessity of continuing the patronage of these advertisers. It is absolutely essential that on all occasions preference should be given to our advertisers.

The pressure of the varied activities that have been thrust on us during the past few months has occasioned so great an encroachment on our time that it has been impossible to accept invitations to attend the meetings of several county societies. We hope to be able to visit these societies during the early winter.

Until greater substantiating evidence is at hand we must refrain expressing opinions or definite conclusions on subjects pertaining to the medical profession response to enlistment in the Medical Corps. We do not believe that the threat expressed by Dr. Martin in New York was warranted. Further we are of the opinion that had the task of securing enlistments been delegated to the officers of the A.M.A. and its allied state and county units, the work would have been accomplished more expeditiously. We understand that Dr. Franklin Martin was a self imposed representative. If that impression is true we must conclude that he must not attempt to coerce by fear of draft. The profession will not be found lacking. All that is necessary is to conduct the work through the established channels of organization.



The Harper Unit is Michigan's first organized unit to depart for duty. Individuals have responded and are responding but the Harper Unit is the first group to collectively set forth on their patriotic duty. The following is the personnel:

Maj. Angus McLean, Maj. Preston M. Hickey, Maj. Henry N. Torrey, Capt. Roland Parmeter, Capt. Louis J. Hirschman, Capt. Ernest K. Cullen, Capt. George E. McKean, Capt. William Spitzley, Capt. John C. Dodds, Capt. Robert G. Owen, Capt. Walter D. Ford, Capt. James F. Breakey, First Lieut. Alexander M. Stirling, First Lieut. Fred G. Buesser, First Lieut. LeRoy L. Belt, First Lieut. Hampton P. Cushman, First Lieut. Edward J. O'Brien, First Lieut. Duncan A. Campbell, First Lieut. Alfred D. LaFerte, First Lieut. Cyrenius B. Lockwood.

We cannot resist commenting on the fact that Uncle Sam has not seen fit to employ the services of osteopaths, chiropractors, Christian Scientists and members of other pseudo-cults to examine recruits or administer to the ills and injuries of our troops. The osteopaths are seeking recognition with but little hope of success.

When the final summarization is concluded we feel assured that our profession will have acquitted itself with honor and that the medical rank will be endowed with greater authority and recognition in all mobilizations.

Yes, our society bought Liberty Bonds. The finance committee authorized the investment of \$2,000 in these bonds.

### *State News Notes*

The following Michigan physicians are in training at Ft. Benjamin Harrison:

Artemus W. Chase, Adrian; George M. Lochner, Adrian; Rollan W. Krafz, Ann Arbor; Harry M. Malejan, Ann Arbor; Udo J. Wile, Ann Arbor; Elijah Van Camp, Athens; Bernard J. Beuker, Atwood; Norman D. Murphy, Bangor; W. P. Morrill, Benton Harbor; Matthew R. Slattey, Bay City; Francis G. Fisher, Cannonsburg; Warren L. Babcock, Detroit; Fredk. W. Baeslack, Detroit; John D. Buck, Detroit; Adolph E. Dreyer, Detroit; Carey P. McCord, Detroit; Frederick H. Newberry, Detroit; Wm. J. Stapleton, Jr., Detroit; Frank Suggs,

Detroit; Wm. J. Du Bois, Grand Rapids; Alexander Morrison Martin, Grand Rapids; DeWitt C. Adams, Highland Park; Geo. S. Foden, Highland Park; Verner H. Kitson, Ionia; Clarence Edward Burt, Ithaca; Randal M. Cooley, Jackson; Roscoe G. Leeland, Kalamazoo; Gordon F. Willey, Kalamazoo; M. L. Holm, Lansing; Milton Shaw, Lansing; Geo. Waters, Memphis; Alexander J. Mackenzie, Port Huron; Don H. Silshy, St. Johns; R. C. Winslow, Sault Ste. Marie; Lawrence Woodlock, Stockbridge; Chas. V. Crane, Tawas City; Jas. R. Martin, Traverse City.

The first 1,000-bed unit hospital in the country will be the enlarged Detroit College of Medicine and Surgery base hospital unit, No. 36.

The unit will be supplemented with departments for treatment of eye, ear, nose and throat diseases, as well as in general surgery.

This announcement was made by Lieut. Col. Burt R. Shurley, head of the unit, upon his return from Washington, Thursday.

Thirty-five nurses will be added, as will fifty enlisted men for the reserve force. The organization will be completed in a few weeks. Fifty thousand dollars to fit out the special departments has been guaranteed by Detroit commandery, Knights Templar.

Dr. Eugene Smith, Jr., of Detroit has resigned as surgeon of the police department.

Dr. Hugo Freund has received an honorable discharge from the Medical Reserve Corp. He is being considered for appointment on the Detroit Board of Health.

The Detroit Clinical Laboratory has issued the first number of a very creditable publication to be known as Laboratory Aids in Diagnosis. It will be sent free to all making their desires known. Address Detroit Clinical Laboratory, 33 High St., Detroit.

Dr. Geo. LeFevre of Muskegon was called to Washington, July 27th, for conference with the National Defense Committee. Dr. LeFevre is president of the State Board of Registration in Medicine.

Dr. Henry J. Pyle, who completed his course at P. and S., Columbia University, N. Y., has become associated with Dr. F. C. Warnshuis of Grand Rapids.

Dr. W. A. Spitzley of Detroit was married July 4 to Miss Jane Robinson. Capt. Spitzley departed with the Harper Unit immediately after the ceremony.

The Upper Peninsula Medical Society will hold its annual meeting at Escanaba, August 2d and 3d, as the guests of the Escanaba physicians.

Dr. W. J. DuBois, Councillor of the Fifth District, was ordered to Ft. Benjamin Harrison and entered service July 4th.

Dr. S. R. Edwards of Calumet has located in Grand Rapids and is associated with Dr. J. G. Huizinga.

Dr. P. D. McNaughton of Calumet has been appointed Major in the Medical Reserve.

Commencing July 10th the State Board of Health will make Wassermann tests free of charge.

Dr. Henry B. Carstens of Detroit has landed and is in service in France.

Dr. V. C. Vaughan, Jr., and Dr. J. W. Vaughan are reported as in service in France.

Dr. L. A. Moss of Newberry committed suicide July 9th.

Dr. A. K. Bennett and Miss Margaret Collin of Marquette were married in June.

Dr. Herbert F. King, formerly of Grand Rapids but of late years of Loomis, N. Y., died June 25th.

Dr. Reichard of Ashley has located in Flint.

Please remember our advertisers.

## *County Society News*

### BERRIEN COUNTY

At a meeting of the Michigan State Medical Society held in Battle Creek, May 10th, 1917, the Society went on record pledging its membership to see to it that the families of all doctors who enlist, and do military service away from home, shall not want.

The Berrien County Medical Society passed a Resolution on May 17th, 1917, unanimously approving this plan. Those of us who remain at home are thus enabled to do a patriotic thing for our country, and at the same time show our loyalty to the profession in a material way.

This Committee will keep in touch with the families and in case of need it will be reported to the proper source, and immediate assistance will be forthcoming.

To carry out this plan, the Michigan State Medical Society now asks each member of a component Society for Five Dollars, (\$5.00). Kindly mail your check without delay to Dr. C. N. Sowers, Benton Harbor.

We all realize, I think, the meaning of this war for America, and the whole world. Let us help make the "World Safe for Democracy." Let us not think of patriotism and dollars in the same breath, but let us give cheerfully. Let us sacrifice if necessary to aid in this great humanitarian work, and bring about as soon as possible, a lasting and durable peace.

Yours sincerely,

THE PATRIOTIC COMMITTEE.

### BRANCH COUNTY

The fifth annual picnic of the Branch County Medical Society was held at Pleasant Ridge, Marble Lake, on Tuesday, July 17th, 1917. A large proportion of the physicians of the county were present, together with their families, and the usual good time for which the social functions of Branch County's medical gatherings have become noted was again realized.

As the weather for the day started out somewhat inclement, the tables were spread upon the spacious porch of "The Ridge Hotel," where everyone ate, talked and enjoyed themselves to their heart's content. Soon after the dinner hour, the clouds passed away, and this beautiful lake resort was ours to enjoy, in all the loveliness which nature and art has bestowed upon it.

About 2:30 p. m., the meeting was called to order by president, Dr. R. W. Ridge, and as this was also the time for the regular meeting of the society, a short business session was held. The war, its possibilities upon the members of our society was discussed; the purpose and result of the special meeting of the state society, held at Battle Creek, was explained by the secretary; the order issued by the State Society for the special assessment, with its patriotic and eloquent appeal, was read, when all members present, with no remonstrance or dissent, responded with their five dollars.

W. H. BALDWIN, Secretary.

### MUSKEGON-OCEANA COUNTY

On June 22, 1917, Dr. R. J. Tivnen of Chicago addressed the Muskegon-Oceana Medical Society on the subject of "The Relation of the Upper Respiratory Tract to General Systemic Infections."

The problem of contract practice has occupied the attention of the Society for the last month and a



committee has drawn the following resolutions which are to be voted upon at the next meeting.

Drs. W. P. Gamber and J. T. Cooper of Muskegon are seriously ill and unable to attend to their practices.

On July 20th the Society will meet with Dr. J. D. Buskirk at Shelby and Dr. Buskirk will read a paper on the subject of Diagnosis and Treatment of Diseases of the Heart.

Dr. C. M. Colignon of Muskegon has been at Grayling the last few weeks assuming the commission of Lieutenant in the Medical Reserve Corp.

Dr. B. R. Eastman has closed his office in Muskegon and left with Mrs. Eastman for Ontario to await his orders for service in the Reserve Corps.

Dr. V. S. Laurin of Muskegon is at present serving in a hospital near London, England, having left the latter part of April of this year and planning to stay six months.

A special committee of Doctors Hotvedt, Marshall, LeFevre, Oosting and Hartman, appointed to consider contract practice, on May 28, 1917, adopted the following resolutions, which are to be voted on later:

1. WHEREAS, contract practice is in no way of any real benefit to either employer or employee.
2. WHEREAS, it is under most conditions degrading to the profession, and detrimental to all fair and legitimate competition.
3. WHEREAS, the Compensation laws of this state provide that every employe has the right to choose his own physician, therefore be it resolved;
  1. That the Muskegon-Oceana Counties Medical Societies hereby declares its adherence to the principles laid down in the Code and Ethics of the American Medical Society;
  2. That no application for membership in this Society shall be considered as long as applicant is in any way connected with contract practice;
  3. That any member of this Society doing contract practice, shall after due warning, be expelled from the Society;
  4. That it shall be considered unethical for any member of this Society to professionally assist a physician doing contract practice within or out of hospital.

*Definition.*—By contract practice, in a medical sense, is understood an agreement by a physician with a second party, to render an indefinite amount of professional service during a definite length of time, for a stated sum of money.

Signed by the committee.

C. J. BLOOM, Secretary.

## ST. CLAIR COUNTY

A regular meeting of the St. Clair County Medical Association was held at Emmet Wednesday p. m., July 12. After lunch at the Emmett House the members assembled in Cadillac hall where a very interesting and instructive lecture on Tuberculosis Treatment was delivered by Dr. J. L. Chester, President of the Association.

A general discussion followed in which members participated.

Doctors present were: C. F. Kuhn and H. F. Baker of Detroit; Kay of Lapeer; Wright of Yale; McCausland of Imlay City; Ross and Buck of Capac; Hall and Mills of Memphis; Smith and Carney of St. Clair; Attridge, Heavenrich and McColl of Port Huron; Woolsey of Toledo; Campbell of Avoca and Burley of Almont.

J. L. CHESTER, Secretary.

## WAYNE COUNTY

The Committee in response to a call from Dr. Peterson met June 12, 1917, in Dr. Biddle's office, Detroit. There were present at this meeting the following members:

Doctors Peterson, Biddle, Warnshuis, Ballin, Olin, Case, Hafford, Haughey, Jennings, Manwaring, McClure, McLean, Eugene Smith and Richard R. Smith.

Dr. Reuben Peterson was elected Chairman and Dr. J. G. R. Manwaring was elected Secretary and Treasurer.

A motion was passed instructing the Secretary to write Governor Sleeper, requesting him to name a medical member of the Governor's State Defense Committee as a representative of that committee on the Michigan State Defense Committee, Medical Section.

The Secretary was also instructed to notify Major Earnest C. Lee (the ranking officer of the National Guard of Michigan) that he is requested to become a member of this committee.

The Secretary was instructed to notify Drs. B. R. Shurley and W. B. Hinsdale that they are requested to be members of this committee, as Deans of Medical Schools in this state.

The Chairman was instructed to request the War Department not to consider any applications for the Officers' Reserve Corps, Medical Section, which have not been approved by the local county committees.

## GRATIOT-ISABELLA-CLARE COUNTY

The June meeting was held as follows with thirteen members and one visitor present.

Reading minutes of previous meeting.

Report of Committees.

Report of Board on Application for Membership.

Communications.

Paper, "Rural Surgery," by J. A. Reeder, M.D.

Neither member of the Committee on Illegal Practitioners was present to report. The report of the Board of Censors on the application of Dr. W. R. Williamson for membership was "not approved." By motion the report was accepted. Dr. Williamson has "Homeopathic Physician" on his sign. The letter from the State Secretary containing the recommendation of the Battle Creek meeting was read. By motion of Dr. Brainerd, seconded by C. B. Gardner, the letter was placed on file, but action was deferred until a later meeting. Dr. J. W. Reeder then read his paper on Rural Surgery. This was discussed by Drs. Brainerd, Barstow, Gardner and Dean.

Next meeting basket picnic in Mt. Pleasant.

E. M. HIGHFIELD, Secretary.

### Miscellany

#### SMALL DOSES OF PITUITARY LIQUID.

Armour and Company announce the appearance of Pituitary Liquid in  $\frac{1}{2}$  cc. ampoules. This enables the physician that prefers small doses of the posterior pituitary active principle to get one product that is entirely free from preservatives of all kinds.

Pituitary Liquid is physiologically standardized, acts promptly when needed as an oxytocic diuretic or stimulant.

Pituitary Liquid is strong, uniform and being without preservatives of the chlorbutanol group, may be depended on to produce desirable results.

Pituitary Liquid is in boxes of 6 ampoules, 65c for the  $\frac{1}{2}$  cc. and \$1.00 for the 1 cc.

*The Calcium Content of the Blood.*—It has been found that the calcium content of the blood plasma of cattle is remarkably constant, even when there is a continuous withdrawal as a result of pregnancy or lactation. It has also been found that there is no marked deviation from the normal in the calcium content of the blood serum of patients in the various stages of pulmonary tuberculosis. Even when a high milk diet was furnished over long periods, the calcium content of the blood was not increased above normal. Further, it was shown that the calcium content of the blood serum of normal human adults

did not differ from that in sufferers from tuberculosis. Finally, it has been found that the calcium content of blood plasma differs little from the normal in advanced cases of uremia or in hemophilia or in purpura hemorrhagica (*Jour. A.M.A.*, June 23, 1917, p. 1915).

*Russell Emulsion and Russell Prepared Green Bone.*—The Council on Pharmacy and Chemistry reports that "The Russell Emulsion" and "The Russell Prepared Green Bone," put out by the Standard Emulsion Company, are inadmissible to New and Nonofficial Remedies. The Russell Emulsion is said to be composed of beef-fat, cocoanut, peanut and cottonseed oils, held in suspension by albumin. The mixture is called a "physiological" emulsion and is exploited on the theory that lime starvation is a main factor in tuberculosis and that amounts of fat are required for the lime starved. There is no proof that tuberculosis is due to an insufficiency of lime in the tissues, and the claims made for the emulsion are grossly unwarranted. Particular attention is called to the exploitation of the emulsion by one Dr. Hague who talks before medical societies. The Russell Prepared Green Bone is said to be made by digesting chicken bones with hydrochloric acid and pepsin and adding glycerin at the end of the digestion. This is advertised as a lime food. The greater value of a few glasses of milk daily is not mentioned (*Jour. A.M.A.*, June 23, 1917, p. 1931).

*More Misbranded Nostrums.*—The following "patent medicines" have been found misbranded under the U. S. Food and Drugs Act. chiefly because the curative claims made for them were unwarranted and untrue: Sterline's Asthma and Hay Fever Remedy is a water-alcohol solution containing potassium and sodium iodids, bromids and acetates, as well as some laxative substance. Sterline's Bronchial Elixir, a solution of morphine, potassium citrate and aromatics in alcohol and water. Lung-Vita, consisted essentially of a petroleum oil, saponifiable oil and a solution containing sugar and glycerin, with a small quantity of benzoic acid. Arch Brand Nerve Tonic, a compound hypophosphite syrup. Arch Brand Blood Remedy, containing 18 per cent. alcohol, sugar, potassium iodid, sarsaparilla and emodin-bearing drugs (*Jour. A.M.A.*, June 23, 1917, p. 1932).

ON GOING TO PRESS WE LEARN THAT THE HARPER UNIT HAS ARRIVED SAFELY IN FRANCE.



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### *Original Articles*

#### PENETRATING AND NON-PENETRATING INJURIES OF THE EYE.\*

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GRAND RAPIDS, MICH.

It is our intention to relate, as briefly as possible, a few errors we have noticed in our seven years of observation as ophthalmologist; not to pose as an authority, nor to magnify or belittle our successes or failures, but to offer as concise a paper as possible based upon penetrating and non-penetrating injuries of the eye.

By injury of the eye is understood all changes in the organ and its appendages that may be the result of traumatism altering its functions and appearance through mechanical, thermal, chemical and electrical forces. A very small number of injuries are confined to one membrane of the eye, that is, injury to one portion that may be felt in another, the whole affecting the function or the cosmetics of the organ. As a rule, an injury even of a superficial type incapacitates a person from pursuing the employment of the moment, and may in certain surroundings even endanger the life.

Foreign bodies are found under the lids, orbit, ocular tissue or within the globe. The most frequent place of lodgment is the cornea and upper lid. It is of the greatest importance clinically to determine whether or not an injury be complicated by retention of a foreign body as successful treatment depends to a great extent on whether the foreign body has been removed. A few years ago it was deemed imperative to remove all eyes which retained a foreign body and an eye in which a foreign body remained a long time without causing blindness and sympathetic disease in the other was looked upon as a pathological curiosity.

In our observation of injured eyes for the past four one-half years we have seen but one case of sympathetic ophthalmia, and in the past

twelve months we have seen and treated 1,700 injuries of the eye. The greater number were of minor importance; though out of that number we had twenty-three cases of panophthalmitis, and of these only five enucleations were done. Three cases, after inflammation had subsided, retained 20/30 vision in the injured eye and 20/20 in the uninjured eye. The other cases have vision ranging from 20/40 to 20/100, excepting one case which we have not dismissed. This case has very large leucoma over the cornea covering the entire pupil. We did an iridectomy three weeks ago and the results were very encouraging, though the area of the cornea free from the leucoma was so narrow that the vision at present as a result from the operation is only 20/60. This should improve in the next month.

Superficial or non-penetrating injuries are the ones we have to deal with most frequently. When a patient comes to us and complains that he has been struck in the eye, we make a very careful examination, and in order to do this successfully we first drop a 2 per cent. solution of holocain or a 4 per cent. cocaine into the eye. We prefer the former. After preparing the eye with this anesthetic we then examine the cornea which is the most frequent place of lodgment of the foreign body. This we do with the aid of loupe and illuminator. If not successful invert the upper lid and in 95 per cent. of the cases we find the irritant either on the cornea or upper lid. But if this proves unsuccessful we look over the conjunctiva and conjunctival sac. To overlook a foreign body is certain not only to cause much unnecessary discomfort to the injured patient, but also to bring great discredit on the doctor concerned. Therefore conservation of the wounded eye must be the first and only aim. If a foreign irritant is found, we should, be absolutely sure it is removed before the patient leaves the office; second, do as little damage to tissues as possible; third, preserve the cosmetics of the organ. A very trivial injury may through neglect, ignorance, or mismanagement result in a total loss

\*Read before Houghton County Medical Society, July 2, 1917.

of vision in one or both eye, disfigurement or even death. Infection seldom occurs from injury to the lids or conjunctiva, but unless proper precautions are used it often follows injury of the cornea.

Injuries of the cornea are of daily occurrence, not only in the practice of the ophthalmologist, but also in the general practitioner's field; as a rule these injuries are first seen by the latter. The larger percentage of foreign bodies found on or in the cornea are very slightly attached, others penetrate the true corneal tissue and remain attached. Those of the latter type break the continuity of the outer layer of epithelium and the anterior elastic layer is laid bare, exposing the sensory nerves which is accompanied by very distressing pain. Now if these injuries are taken care of promptly, aseptically and correctly the corneal epithelium regenerates so rapidly that in many cases within twenty-four hours after an injury it has been restored completely.

Among artisans the most frequent type met with is the embedding in the corneal tissues of small chips of metal. The particle is at white heat when it leaves the tool and when it strikes the eye it burns its way in. As the heat has rendered it aseptic it would in all probability rarely cause any serious subsequent damage; but the sufferer is desirous of having it removed on account of the immediate pain, so he appeals to his fellow workman who often with his unskilled and dirty fingers introduces septic material, if the eye has not already been infected by the patient himself with his fingers or handkerchief which may carry the most virulent germs.

Last year we saw and treated over 2,000 eye injuries ranging from those of foreign body on the cornea and under the lid, to those which penetrated the globe. Out of this number the greatest criticism was due to the patient himself for any lack in successful treatment and favorable prognosis. It is his failure to report immediately after the injury. This is particularly true in certain types of injuries as well as certain types of men.

First we call your attention to the type of man who fears the doctor will keep him from work a few days and he can't afford to lose the money. Second, those who receive a slight abrasion of the corneal tissue where the foreign body does not remain embedded and the tissue is left smooth and non-irritated. Third, those who have some fellow workmen remove or try to remove the irritant with a tooth-pick or some other infected instrument from their pockets.

Fourth, those cases in which very sharp slivers as of emery, penetrate through the outer conjunctival membrane and then are covered by the same, leaving a smooth surface.

Septic infection is not uncommon and is one of the most dangerous complication. It may develop from a trivial injury of the cornea. The infection which in my opinion is most fatal to vision develops in the form of *ulcus-serpens*, due to the *pneumococcus*. This ulcer is usually situated near the center of the cornea. It is somewhat crescentic in shape, and while its base shows only a shallow depression, rough and glistening, its margins are opaque, raised undermined and suppurating. One of its most striking characteristics and that from which it derives its name, is its tendency to creep over the surface of the cornea. Its peculiarly infective nature may be easily diagnosed by its extreme painfulness, by deposits on Descemet's membrane and often by hypopyon, while associated with these are photophobia, injection of the conjunctival and ciliary blood vessels.

Leber's researches have thrown much light upon the pathology of serpiginous ulcer. By experiments he has shown where the cornea is inoculated with micro-organisms, that the toxins they manufacture are speedily carried by diffusion to the surrounding parts and set up an irritant action in the bloodvessels distant from the seat of infection. The circum-corneal vessels become dilated and as a result rapid infiltration of the surrounding tissues takes place. The white cells quickly force their way through the cornea to reach the area where the microbes are most active. The nearer they approach, the more active the toxins, and at length if over-powered by the poison many perish and form a purulent zone around the ulcer, while those that survive enter the microbial area to wage war against the germs. In its essence, the corneal tissue may be regarded as a sheet of protoplasm and one of the most vital structures of the body. Negligent treatment and treatment without aseptic aid weakens the cornea to a degree whereby perforation may take place with the danger of every part of the eye becoming involved.

We have a case now of a man who was injured with a very slight abrasion of the cornea. At first it did not seem necessary to confine him to a hospital. On the second day when the patient returned for treatment the ulcer was in evidence, this developing over night. He at once entered the hospital and the usual treatment was prescribed. After six weeks of care-



ful attention and anxious waiting the inflammation subsided and the cornea was left with large leucoma, but no useful vision. His only hope now is iridectomy. Would it not have been advisable to confine such a patient in the hospital at first, as our opinion is, that he re-infected the eye at home.

From the number of cases we have seen in the past four and one-half years we would consider it very essential for every corporation to have proper facilities to keep these injured cases under observation for the first twenty-four to forty-eight hours, especially those of the indifferent and uneducated type who observe no rules in regard to keeping the eye covered. Often after strict orders to the patient, not to uncover the eye he will return with the bandages removed, stating that they fell off. The extra cost to a corporation to provide a ward for this special type of cases would be repaid many times for what they pay for the loss of one eye. Our plea is that energetic and thorough treatment for the first forty-eight hours after the eye is injured is of the utmost importance to obtain a favorable prognosis.

#### PERFORATING WOUNDS.

Perforating injuries of the eye ball may be divided into lacerated, incised and punctured cases. The first may be produced in many different ways; by a stone, a blow from the fist, base or tennis balls, striking the eye with a rope or wire. The structure of the eye is peculiarly intolerant and many persons have lost their sight as a result of a contusion which at first seemed very trivial. Injuries about the frontal or malar region are sometimes followed by blindness. The explanation of this is that it is due to fracture through the optic foramen. The optic nerve is torn or compressed from hemorrhage or clot.

We had a case referred to us in September, 1915, where the patient had fallen from a wagon striking the region of the eye against a stone. The congestion and ecchymosis about the eye was so great at first that the loss of the sight was not revealed until the third day. The ophthalmoscope revealed nothing of a pathological nature at first. The pupillary reaction was not normal; the stimulus to light and the pupillary contraction was only partial and momentary, and full dilatation would occur while light was being held in front of the eye. At the end of the second week, by means of the ophthalmoscope, we could detect a partial atrophy of the optic nerve. The skiagram showed no line of fracture. We therefore make a diagnosis between two

conditions, pressure from hemorrhage, or torn or twisted nerve.

*Treatment.*—Patient was confined to bed with full doses of K. I. and hypodermic pilocarpin sweats every third night. On the third day the patient could see fingers. October 1st, 1915, he could read 20/40. Saw the patient for the last time December, 1916, and he had 20/20 vision in the injured eye.

CASE 2. Boy 10 years of age, struck in the eye with a stick lacerating the tissues  $\frac{1}{8}$  inch at the external corneal scleral margin. Pupil was dilated and would not respond to light. Anterior chamber was filled with blood, but no loss of vitreous or injury of lens.

*Treatment.*—Sutured scleral portion, confined patient to bed, covered eye and administered the usual treatment. At the end of two weeks the patient had 20/20 vision and the pupil reacted to light and accommodation.

Incised wounds are usually easily diagnosed. They are accompanied by prolapse of the iris and often injury to the lens, or by escape of the vitreous. If the wound be extensive and the escape of vitreous large and the ciliary region be involved the eye is almost certain to be lost. The wound may heal and often there is subsequent inflammation to the uveal tract, and shrinking of the globe. The amount of infection that occurred at the time of the injury is the greatest factor in the prognosis.

Incised wounds of the cornea admit of a more favorable prognosis as a rule than those involved in the sclerotic. This is probably due to the aqueous, as it washes away great numbers of germs.

Permit me to report three cases that were of special interest:

CASE "A". Age 38 years, struck in eye (left) June 16th, 1916, by a sharp sliver of stone or copper. The piece passed through the cornea and was embedded in the posterior part of the lens. At the time of the first visit the patient showed little inflammation and foreign body could be seen very distinctly with the ophthalmoscope. Mydriatics were used and the eye kept covered for four days after which all irritation subsided and the patient returned to work the seventh day. We saw him a few days ago and he says that he has suffered no inconvenience with the eye except that the vision is not as good as in the right. Vision 20/40 with glasses. The most unusual and interesting part is that he did not develop complete traumatic cataract. Only a few opacities can be seen at the present.

CASE "B". Male 48 years of age. While cutting tin a piece flew into his left eye piercing the cornea

and iris and remained in same. Patient did not make any attempt to remove it but covered the eye with a bandage. It was seven hours after the injury when we first saw him. When we removed the bandage and opened the lids the piece of tin fell out. The iris was prolapsed, part of vitreous had escaped and the anterior chamber was filled with blood.

*Treatment.*—Clipped ragged edges off the iris and injected 15 per cent. argyrol into the anterior chamber, covered the eye and prescribed the usual treatment. At the end of the fourth week the eye showed some improvement, but the patient became restless and was determined to return home which was fifteen miles from any doctor. Not being able to persuade him to remain longer and knowing that he could not take care of himself we feared sympathetic ophthalmia might result and removed the eye.

CASE "C". Girl 6 years of age, accidentally struck the point of a pair of scissors in the left eye. We saw the patient for the first time on the sixth day after the injury. The pupil was contracted to pin point size with the iris adherent to the cornea. The family doctor was called the first day of the injury and advised them to see a specialist, giving them some antiseptic for immediate use. They evidently did not deem it necessary to be in a hurry; therefore when the child was brought to us, we found the above mentioned complications. After three months treatment the inflammation subsided but no useful vision remained. Eight months after the injury we did an iridectomy, which was very difficult as the iris and cornea were adherent. Iridectomy proved successful to the extent of 20/40 vision.

The treatment of any penetrating injury of the eye is governed by circumstances; each case is a rule unto itself. In those where there is traumatic detachment of the retina, confinement to the bed is essential, lying most of the time on the back, both eyes closed with a pressure bandage. In those cases where the sight and character of the detachment are deemed favorable, scleral puncture is performed. On the second day we usually give a sub-conjunctival injection of 3 per cent. dionin with 5 per cent. sodium chloride, every care being taken to assure asepsis. This injection is administered every third or fourth day, depending on conditions, and continued for fourteen days. With this treatment we prescribe hypodermic  $\frac{1}{3}$  to  $\frac{1}{4}$  grain pilocarpin at night. In the past year we have had four cases of detached retina from injuries, and the above treatment was successful in three cases, the fourth case would not remain in the hospital to continue treatment longer

than two weeks, and at that time there was a marked improvement; but when the patient returned after four days the retina was again as completely detached as at first.

Penetrating wounds of the eye are at all times serious, but the prognosis is always more unfavorable when complicated by the presence of a foreign body in the interior of the eye. It is true the foreign irritant may become incysted and be carried about in the eye for years, but our experience goes to prove that under such circumstances destruction or inflammation may occur at any moment. It may be so severe that prompt enucleation only can save the uninjured eye from sympathetic ophthalmia.

Weekers states that the extreme rarity of sympathetis ophthalmia in the war is amazing compared with the great number of eye injuries. In his personal experience he has encountered only one case among 800 injuries. In the Franco-Prussian war about 55 per cent. of the eye injuries were complicated with sympathetis ophthalmia. He describes this difference as due to asepsis and anti-sepsis which are now so generally used.

The aseptic technic of any operation upon the eye should receive as much consideration as in the opening of the abdominal cavity. This is especially important if the eye is going to be incised or has a wound exposing the interior. Nature may protect our poor technic and present us with a glittering chain of successes but Oh! that I may see the day that each hospital will be equipped with a more proficient training system that will produce a formidable army of nurses who will wield their swords of antiseptics against all germs so that if one may possibly give the password and be admitted, this one will die from loneliness and a broken heart.

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## CERVICAL RIBS ASSOCIATED WITH SYMPTOMS OF HYPERTHYROIDISM.

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(From the Department of Internal Medicine, University of Michigan).

Professor A. W. Hewlett.

Dr. Cannon and his associates (1) (2) have produced symptoms of hyperthyroidism in cats, by anastomosing the proximal end of the severed phrenic nerve with the distal end of the severed cervical sympathetic.

Under these conditions rhythmical stimuli pass from the phrenic nerve to the thyroid



gland, through the cervical sympathetic. Following the operation, the animals became excitable, developed tachycardia, diarrhoea and a high basal metabolism; symptoms not unlike those seen frequently in patients suffering from exophthalmic goitre.

These experiments have directed my attention to some cases, which I think warrant publication, as they seem related to Dr. Cannon's work.

**CASE 1.** Patient, Miss C. DeJ. age 20, clerk, entered the medical service at the University Hospital, April 13th, 1913, complaining of pain in both sides of the neck and in the right arm and **numbness on the ulnar side of the right hand.**

Family and personal history unimportant. Four years ago (1909) she first noticed a swelling in her neck, which her doctor called a goitre. About one year later, she first felt palpitation of the heart, no other symptom observed at that time. In December, 1911, following tonsillectomy, her goitre became larger and at the same time she was very nervous, her heart beat more rapidly and she was forced to go to bed for five weeks, after which her pulse rate dropped from 150 to 100. Since then, however, she has not been well, complaining of shortness of breath, excessive perspiration and nervousness. With these symptoms two years ago, she developed exophthalmos. Her present trouble began in 1912, following an "attack of quincy." She noticed numbness and tingling sensations on the ulnar side of the right hand. Since five months ago she has had pain continually in both sides of her neck, because of which she came to the hospital.

**Examination.**—Temperature 98.3 degrees, pulse 144, respirations 24, weight 122 pounds. Well nourished, medium sized frame, musculature is in good condition. No general glandular enlargement. Skin is warm, moist and elastic. Flush to the face. Pupils are dilated, but equal. React to light and to accommodation normally. Eyes are prominent. Patient wrinkles brow slightly on looking up. The palpebral fissure is wider than normal. Convergence is poor. The upper lid follows the eye-ball jerkily. There is a fine tremor of the fingers. Tongue is tremulous. There is a moderate sized soft goitre, no thrill. A continuous murmur is heard over either margin of the gland. On palpation there can be felt on either side of the gland, a hard bony projection, (cervical rib). Palpation in this region causes considerable pain. There is a tendency to clubbed fingers, right hand. There is atrophy of the interossei muscles, more marked on the right, and atrophy of hyperthenar eminence on both sides, more marked on the right. There is some disturbance of sensation on the outer margins of both hands and the small fingers.

**Thorax.**—Is well formed and symmetrical. Percussion note is resonant. Fremitus is normal. Spoken and whispered voice negative. Breath sounds good quality. No rales.

**Heart.**—There is marked pulsation over the pulmonary area. No shock or thrill. Apex is percussed in the 5th i. c. s. just inside the mid-clavicular line. Upper border is at the 3rd rib. Right border at the right sternal margin. Sounds at the apex are valvular, no murmurs; there is over-action of the heart. Pulmonic second is loud, and slightly impure. Some slight-accentuation of the second aortic. Respiratory arrhythmia.

**Back.**—Spine is straight there is an acniform eruption over the back. Percussion note is resonant, fremitus is normal. Spoken and whispered voice unchanged. Breath sounds negative.

**Abdomen.**—Is above the level of the ribs. Tympanitic. Liver or spleen not felt. No masses felt. No hernia.

**Reflexes.**—Knee jerks are prompt and equal.

**Radial.**—Not palpable, pulse is rapid, small, regular, tension is low.

**Stool, Blood and Urine.**—Negative.

**Blood Pressure.**—Systolic 120 and diastolic 90. X-ray plate No. 8-3531. Diagnosis: Bilateral rudimentary cervical ribs, most marked on the right side.

**CASE 2.** Mrs. A. G., age 25. Referred from Gynecology because of goitre.

Family and personal history not important.

Patient comes to the hospital because of dysmenorrhoea and nervousness. Has had dysmenorrhoea since age of 17, and for the past six months she has noticed that her "neck has become prominent" and it is hard for her to breathe or talk, because of pressure sensations in the throat.

Her eyes have been prominent for eight years. She has always been nervous, but feels more so now and she cannot remember how long since she has suffered from palpitation of the heart, perhaps eight years. She knows that it has become much worse in the past few months. Otherwise she has no complaints.

**Examination.**—Weight 113 pounds. Temperature 98.2, pulse 104, respirations 20. Scant panniculus, small frame, skin is warm, dry, elastic, sallow color. No general glandular enlargement. Pupils dilated, react normally and are equal. Eyes are prominent, forehead does not wrinkle well, upper lid lags, palpebral fissure wider than normal. Thyroid shows uniform enlargement of both lobes and isthmus. The gland is firm and there is a faint systolic thrill on the left side. Systolic murmur heard over the left lobe, and to and fro murmur is heard over the vessels and lobe on the right. There is a nest of small dilated veins in the left supraclavicular fossa.

*Thorax*.—Small, slender and symmetrical. Lungs normal resonance, voice and breath sounds normal. No rales.

*Heart*.—Apex in the 5th i. c. s. just outside the midclavicular line. Right border 2 f. b. from mid-sternal line. Mitral sounds clear, over-action, sounds at the base are snapping. No murmurs.

*Back*.—Kyphosis, curvature in the upper thoracic region.

*Abdomen*.—Negative.

*Reflexes*.—Are prompt but normal.

*Radial*.—Regular, rapid pulse, normal tension. No atrophy of the muscles in arms or hands, no change of sensation in the hands. Muscular strength diminished. No tremor.

*Laboratory Examination*.—Negative. Wassermann reaction negative. X-ray report No. 10-4134. Bilateral cervical ribs, apparently articulating with sternum on both sides.

Unfortunately the patients left the hospital without operation, or opportunity for further observation.

#### DISCUSSION.

In view of Dr. Cannon's experiments, a relation between the anomalous ribs, the cervical sympathetics, and the thyroid gland, seems suggested. In the last patient a question as to the diagnosis of Grave's disease might be raised because of the absence of warm, moist skin, tremor and other concomitant symptoms. She was regarded by all who saw her, as a case of cervical sympathetic stimulation.

It can readily be seen that pressure by cervical ribs upon the cervical sympathetic ganglia and nerves is possible because of their close anatomical relations. A case has been reported by Müller (3) (Paralysis of the right cervical sympathetic). Symptoms; such as coldness and sweating on the affected side (4), tachycardia (5), widening of the palpebral fissure and dilatation of the pupil on one side (6) have been observed, and like symptoms have been produced experimentally by stimulation of the cervical sympathetics. Also changes in the thyroid gland have been produced by stimulation of the thoracic sympathetics (1).

Dr. L. Wilson (8) has recently observed degenerative changes in the cervical sympathetics in every case of exophthalmic goitre, examined by him at the Mayo Clinic. And apparently these changes did not occur in other portions of the sympathetic system.

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#### SHELL SHOCK.

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"Shell Shock is a term applied to a group of varying signs and symptoms, indicative of loss of functions, or disorder of functions of the central nervous system, arising from exposure to forces generated by high explosives." (Mott). Eder believes the term "War Shock" a better one. The varied symptomatology, the interesting psychological problems, and the obscure pathology of this disease, render its study of great interest to the physician. Alden Turner, in his study of a large number of cases, places them in two groups: (1) Those due to shock from the explosion of shells in the immediate vicinity of the soldier, (2) Neurasthenic states due to physical and psychical stress and fatigue. The second group resembles the same disorder that is so common in civil life and usually called a temporary nervous breakdown. This is so familiar to the physician that it need not be considered here.

#### ETIOLOGY.

There are probably many factors in the production of this psychoneurosis. Never before was the soldier exposed to such violent explosive forces. He has to face shells, mines, torpedoes, mortars, bombs and hand grenades. He is frequently blown up in the air, and more often buried by sandbags, as the result of a cave-in of his dugout or trench. Noxious gases, such as chlorine, carbon monoxide, and picric acid, permeate the air. He suffers much in the trenches from prolonged anxiety, cold, wet, hunger and other hardships. Scenes of horror, loss of his comrades, and the fear of death produce a psychic trauma. The personal factor has prob-



ably some influence, for seasoned soldiers, while not immune, do not seem to have as severe symptoms as recruits, and seem to recover more quickly. About 10 per cent. have had a previous nervous breakdown, and a few gave an epileptic history. Few of these men presented any visible signs of injury, and shell shock was rarely seen in soldiers who had been seriously wounded. Many of the men belonged to a low category and had a low wage-earning capacity. One could frequently elicit a history of impaired health before the breakdown and a lowering of the soldier's resistance from such things as influenza, enteritis, disordered action of the heart, or tonsillitis. The possibility of syphilis accounting for some of the symptoms should always be considered. The family history occasionally elicited an inheritance of neuroses or of insanity.

#### PATHOLOGY.

The pathology of the disease is obscure. Soldiers have been found dead without signs of injury, and autopsy has revealed punctate hemorrhages in the brain substance. Mott considers these due to gas poisoning. M. Arnoux, a French engineer, computes the dynamic alteration in air pressure, within a few yards of an exploding shell, as 10,000 kilos to the square metre. One could readily see how this could form air bubbles in the blood and tissues, with punctate hemorrhage, so commonly seen in caisson workers. Mott's researches lead him to support Monakow's diaschisis theory, i. e. that the violent changes in air pressure temporarily dissociate systems of neurons, anatomically and functionally correlated. Probably the cortical structures are chiefly affected, the lower vital centres continuing to function normally. Certainly this theory explains many of the symptoms. Thus, retrograde amnesia is a common symptom, and can be explained by dissociation of cortical perceptor neurosis. Functional blindness and deafness may be explained in the same way. Possibly the functions of the endocrine glands may be affected through their nerve supply. Ravant, who examined the cerebrospinal fluid of many cases, found blood and an excess of globulin, both clearing up with the improvement of the symptoms.

#### SYMPTOMS.

The onset is usually sudden, occurring in the trenches, or immediately after return from the trenches, or more rarely, a day or two later. A period of unconsciousness is very common. It is of variable intensity and may last for a few hours to three days. This is followed by a

dazed semi-conscious condition. It is then that the various functional disorders make themselves obvious. The facial expression is characteristic and suggests terror or bewilderment. His hands are cold and blue, he is restless, and he complains of a severe headache. There are a number of symptoms and signs that deserve a more detailed description.

Amnesia, or loss of memory is one of the most constant symptoms. He seems dazed and may have forgotten his name, number, age and regiment. This condition gradually improves, and it is interesting to notice some phases of memory returning before others, e. g., musical memory, or identification of tunes. Retrograde amnesia is very common, i. e. the patient may have no recollection of what happened during the few hours prior to the accident, and of the accident itself.

Terrifying dreams at night, or in the half waking state are constantly complained of. Usually, but not always, they relate to past military experiences. They waken the patient and leave him distressed and exhausted. Visual hallucinations or illusions may persist into the waking state.

A variety of gaits may be seen. Usually the patient is dizzy and the gait is merely an unsteady one. Some times there is inability to stand or walk (astasia-abasia). Shuffling or short-stepping gaits may be also observed.

Motor disturbances are always present. Coarse general tremors are seen in the acute stage, and may affect the hands, arms, legs, tongue or entire body. Tics, such as blepharospasm, facial spasm, or torticollis are common. Three of my cases lead a functional paraplegia. Functional paralysis of the legs was frequently observed, and was probably suggested by slight trauma, e. g. a fall on the leg, or bruises from burial by sandbags.

Sensory disturbances are always to be discovered and have all the characteristics of the anomalies seen in hysteria, i. e. anesthetics of variable distribution, hyperesthesias and analgesias.

The reflexes are usually normal. In cases of anesthesia of the feet, the plantar reflex is absent. Occasionally one elicits an ankle clonus.

The commonest speech defects are mutism and stammering. About 5 per cent. of all cases have aphonia. The patient cannot make an audible sound, cough or laugh. Curiously enough, they may shout in their sleep and under a light etherization. The stammering cases are pitiable—the more the patient struggles the

worse he succeeds and after a few minutes, he is quite exhausted. The condition is due to a "complex of inhibitions and exaggerated effort." (Mott).

There are usually some eye symptoms and signs. There may be a temporary blindness for a few days, and a "smoky" vision afterwards. Commonly there is contraction of the fields of vision. Their eyes may be turned up and in. Blepharospasm, photophobia, exophthalmos and hemianopsia have been noted.

There are a number of auditory disturbances. The most common is hyperacusis, in which the patient is distressed and startled by ordinary noises. Occasionally there are hallucinations of hearing e. g. "whizzing of shells," "drumming noises in the ears." More distressing still are cases of deafness, psychical in character. This often persists for many weeks. Rarely one discovers disorders of smell, (anosmia, or hemianosmia) and disorders of taste (hemiagnosia).

The mental state is always disturbed. Usually one notes a slow reaction, mental dullness, and confusion. The patient is unable to carry on mental effort without fatigue or headache. Officers often present an "anxiety neurosis," and are afraid of making mistakes or assuming responsibility. Disorientation as to time and place, and mistakes of identity of persons have been rarely noted. "Fits," resembling "petit mal" are occasionally seen. Collier has reported a case presenting wandering attacks with loss of memory. Insomnia is the rule. The patient usually becomes depressed.

Many cases have disordered heart action, characterized by tachycardia, simple and paroxysmal, palpitation and precordial pains. The blood pressure is low as a rule. Vaso-motor instability is shown by sweats, and cold blue hands and feet.

#### DIAGNOSIS.

The most important thing to exclude is malingering. The simulation of disease and the exaggeration of symptoms is common enough, the objects being, to avoid duty, to claim a pension, or to excite sympathy. The medical officer must not only know the differential diagnosis of disease, but also the psychology of the soldier.

One must constantly realize that definite psychoses may develop in the soldier, particularly dementia praecox in the young soldier. The apathy, retardation of mental processes, the amnesia, and aphonia are very similar. Undoubtedly there have been many cases where this disease was already developing, and the

stress of war simply expedited the attack. A Wassermann test should be made to exclude active syphilitic brain disease.

#### PROGNOSIS.

No deaths occur in these cases after entry to the hospital, although one has to assume that deaths from shell shock may occur on the firing line. Recovery is tedious, and the duration of the disease may vary from a few weeks to a few months. There is a tendency to relapses. Certain symptoms may persist for a long time, especially deafness and aphonia. Anomalies of memory are occasionally seen, the patient losing certain experiences of his life.

#### PROPHYLAXIS.

Perhaps it would be well to exclude men from the army who have a family history of insanity or who have a personal history of a nervous breakdown. Officers should encourage their men to take all the rest and sleep possible. Especially should they make up their sleep directly after coming from the firing line.

#### TREATMENT.

As in all neuroses, it is essential to gain the confidence of the patient, and this is best accomplished by a thorough, painstaking examination. The medical officer should look cheerful, be cheerful, and carefully avoid any suggestion of non-recovery. At the onset the patient should be put to bed. Dejerine emphasizes the importance of isolation and advises that curtains be put around the bed. Sleep should be secured at first by mild hypnotics or sedatives, such as full doses of bromides. The excretory functions should be looked after, and the appetite stimulated, if necessary, by bitter tonics. The most important part of the treatment is the employment of suggestion, persuasion, and re-education, and this will tax the ingenuity of the physician. The patient should not be kept in bed too long, and should soon be encouraged to take exercise in the open air, and to indulge in games and amusements. The danger of psychic contagion in large hospital wards should be realized. Hypnosis with post-hypnotic suggestion is in favor with many officers, but opinions vary as to its value. It is most useful in insomnia and dreams. Eder, an enthusiastic Frenchman, finds psychoanalysis most useful in dispelling troublesome dreams. It takes a great deal more time than the average medical officer has at his disposal. Prolonged massage and electricity are perhaps better avoided as they seem to establish the idea of disability. There are certain types of soldiers who do



better under a rigid, stern discipline than with too much sympathy. Confusional cases are much benefited by hydrotherapy. Aphonia is best treated by light etherization with suggestion in the stage of excitement. The patient is induced to talk and kept talking until quite conscious. Intralaryngeal faradism for aphonia is usually worthless and often harmful. Photophobia is best treated with dark glasses for a definite time, e. g. three days, with the suggestion of a cure as the end of that time. Stammering is cured by educating the patient to speak very slowly, timing each syllable by some rhythmic motion of the hand. Aimé advises epinephrin in asthenic cases presenting mydriasis, assuming a suppression of the suprarrenal function from disturbance of the sympathetic nervous system. Most cases of shell-shock do very well on the treatment outlined above, but unfortunately stubborn cases are met with. These cases should be sent from a general hospital to a special neurological, or special mental hospital, according to their predominant symptoms. It is questionable whether a soldier who has once had shell shock should even be sent back to the firing line. Usually the symptoms promptly recur.

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### HEAD INJURIES.\*

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Head injuries are conspicuous incidents in today's busy life. Street car accidents, factory casualties, automobile collisions and elevator plunges are a heavy toll on modern industry and locomotion.

During the year 1916 there were admitted to the wards of the Detroit Receiving Hospital 319 cases of head injury. They were classified as follows:

Concussion of the brain ..	35 cases
Laceration of the scalp ..	181 cases
Fractured skulls .....	92 cases
Contusion to head .....	11 cases

Dr. Dretzka, superintendent of the Hospital, told me this morning that as many more am-

bulant cases of head injury had received treatment there and also that 150 other cases of skull fracture had been transferred to other Detroit Hospitals in the same period.

The coroner's courts of Detroit do not issue or have authentic details but the clerk informed me that there were 3,000 coroner's cases in Wayne County last year, and that they averaged ten per day so far this year. Of this number 2,000 was the estimate for accidental deaths, 25 per cent. of which were the result of head injuries. Dr. Dretzka made a similar estimate of the proportion of head injuries to all cases coming to the Receiving Hospital for treatment.

Those figures coming from the city "where life is worth living" make head injuries a timely and interesting subject for a medical meeting.

In the consideration of this subject it should be observed first of all that head injuries and skull fractures are not synonymous terms. Wounds and contusions of the face, scalp and brain are head injuries also. It is a fact that scalp or brain, either singly or both together, may be injured and the skull not be fractured, and it is also true that the skull may be fractured without causing appreciable lesions of scalp or brain.

Wounds and contusions of the face and scalp have cosmetic aspects. Their chief importance though lies in their being avenues to brain infection, a consequence which may ensue even in the absence of fracture. However, since skull fracture predisposes strongly to brain infection, proper treatment of scalp wounds includes both careful diagnosis of possible fracture and sufficient drainage. Aseptic technic is a *sine qua non*.

Moreover skull fractures in and of themselves are not of particular moment so long as the fragments are in contact. The skull is compact, light, and yet strong and bony shaped and buttressed for the support and protection of the most complicated and important mechanism within the body. Its general form is quite universal, but you may witness wide and notable variations in contour among your fellows and you should remember also that loss of integrity of the cranium from trauma or surgery is not incompatible with life or function.

Although, therefore, the skull is subject to considerable variation in the species without serious detriment, a departure from the standard of the individual may be attended by profound consequences.

As proof of that statement be reminded of the aphasia and paralysis of the right extremities

\*Read by invitation before the Kent County (Michigan) Medical Society, March 28, 1917.

that results from a depressed fracture in the left temporo-parietal region and the fatalities of most basal fractures.

Skull fractures are important lesions then because of the greater chance of brain infection and especially because of the brain injury they produce. That injury is effected directly by pressure from depressed bone and by actual destruction of brain tissue and indirectly by pressure of blood from ruptured meningeal or other vessels and by contusion of brain.

It becomes evident from the foregoing that it is brain injury and not bone fracture and not even face or scalp injury which is the all important matter in head injuries. It is from that viewpoint that head injuries should always be studied and treated.

Having ascribed to the skull and its outer covering their relative importance in head injuries let us consider more in detail the causation and effects of brain injury.

The brain is subject to injury in four ways, namely, by infection through open wounds, by the destructive effects of foreign bodies and skull fragments, by pressure from bone or blood and by contusion.

The possibility of brain infection through open wounds has been referred to already and is self evident. Open fracture of the skull, whether of the vertex or of the base, lend themselves readily to the access of infection but infections of the scalp or face may extend to the intracranial structures even in the absence of skull fracture. It is true in these cases as in wounds of the abdominal wall that the fate of the injured person rests with the one who applies the first dressing.

The laceration and crushing of brain tissue by foreign bodies and skull fragments puts that much of it beyond redemption. The kind and amount of damage done depends upon the site of injury and, except in silent areas, will be indicated by the clinical symptoms and signs as well as by direct examination.

Likewise depressed bone and blood clots will cause twitching, convulsions or paralysis according to the region involved and the degree of pressure. If there be a markedly depressed fracture the clinical signs will appear at the time of the injury. If pressure be due to hemorrhage, symptoms will supervene sooner or later depending upon the amount of bleeding.

Contusion and concussion of brain represent the damage by the impact of bone, brain and intracranial fluids. Unless the brain be crushed or lacerated there will be seen little or no evi-

dence of injury and if the skull be intact there will be no clue to the amount of damage done other than may be interpreted from the clinical symptoms and signs.

It is a fact nevertheless that the brain may be damaged even seriously and not show evidence macroscopically upon direct examination. The clinical symptoms subjective and objective range from "seeing stars" to persistent headache, altered disposition and forms of insanity.

If brain contusion be severe, edema will result similarly to its production from like injuries on the exterior surface of the body. Edema means swelling and increased pressure. Inasmuch as the room for expansion within the cranium is limited, the margin of safety is soon reached and crossed. That condition is impressively forced upon our attention in cases of basal fracture, in which medullary edema develops. The slow pulse rate and stertorous breathing are characteristic and indicate the approach of danger of pressure from edema. The same condition develops in varying degree from contusion of any portion of the brain.

Cerebral edema means interference with intracranial circulation, venous stasis, capillary collapse, increased intraventricular fluid, lessened absorption and the completion of the vicious circle by more edema.

The theoretical treatment of head injuries is still the rule. The practical application of our present knowledge awaits, I fear, the next generation. When I see in consultation these cases dying two, three and four days or more after the receipts of the injury and realize that the chance of saving life has been lost in palliative treatment I lose hope in the present generation living up to their lights.

Head injuries should always be considered serious until they shall have been proved otherwise. I have demonstrated the existence of long fractures of the skull in cases having a history of injury but exhibiting at the time no symptoms. I have removed hair and debris from impacted skull fractures in cases in which small scalp lacerations were noticed but considered of little importance. I have had occasion frequently to elevate depressed bone and to remove clots in closed cases. I have trephined and removed clots from the side opposite to that where the blow was received.

All operated cases do not and will not survive but careful diagnosis, close observation and prompt surgical treatment will save from 20 to 30 per cent. more lives.



## TRANSACTIONS

OF THE

## Clinical Society of the University of Michigan

Stated Meeting, June 6, 1917

The President, CARL D. CAMP, M.D., in the Chair

Reported by REUBEN PETERSON, M.D., Secretary

MEDIEVAL CARE OF THE INSANE IN  
MODERN TIMES. "THE COUNTY  
CARE SYSTEM."

HAROLD S. HULBERT, M.D.

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*Introduction.*—I know that the physicians who are members of this Society will permit me to use false names of persons and of places in this paper. The things to be described should prove of sufficient interest; the locality is insignificant, especially when it is known by those who have gone into this matter extensively that similar conditions to those here described have been found elsewhere under similar circumstances. To you and to others with similar education and environment may never come the opportunity to know first hand of the care of the insane under the county care system in rural districts. You are accustomed to think that in 1917 the insane of the community are warmly and comfortably sheltered and clothed, well fed, according to their health and needs and given scientifically modern medical and nursing attention, all with reasonable economy in large suitable institutions.

*Historical.*—There is not room nor proper place in this paper to go into the history of the care of the insane. But briefly, it may be mentioned that in ancient times the insane were regarded as bedeviled and were killed or treated worse than criminals; in medieval times, they were permitted to live but locked up under frightful and horrible conditions, and only in the last two hundred years in Europe and in the Americas have they been treated as sick persons. Now it is rather generally recognized that the insane are sick and that they have certain rights and that they must have specialized

medical and nursing attention. An insane person is helpless because of his mental incompetency, and humanitarianism demands that society care for him. When society deprives an insane person of his liberty and of his last slight chance to help himself, then society is in duty bound to provide for him adequately as his needs require. It is inhuman to refuse to provide for the insane. It is unfair to the individual for society to protect itself by incarcerating the insane and then, because of selfishness or shiftlessness, to avoid affording to the insane every bit of scientific custody and care now known within the meager range of human knowledge. And the burden of maintaining the insane rightly falls upon society because in the majority of cases of insanity, society has permitted the existence of the causative factors of insanity in such matters as licensed manufacture and consumption of alcohol for taxes, in the tolerated social evil, in the absence of adequate regulation of marriage with its train of the evil effects of bad heredity, in the selfishness of social conditions where the individual with latent or apparent weakness must assume overwhelming burdens in the struggle for existence, in the rush of modern life leading to early old age, and in the perpetuation of preventable diseases, such as typhoid, which affect the mental as well as the physical health.

*Local Conditions in General.*—Where society as one large group such as each sovereign state in the United States shirks the burden of the care of the insane, then smaller groups such as the county and the family must assume the inescapable burden but with questionable success. But to the smaller group, such as the county, this burden is unwelcome. The community saves itself in two ways; first, by in-

carcerating the insane and second, by reducing expenses to the minimum which will maintain life. These methods sacrifice the individuals who are insane; they are thus denied the things which are their right and which society should give them. Many of the states in America have a double system; one or more large state hospitals for the insane, which, however, are too small to admit all the insane in the state, and some sort of provision in the county poor farms for most of the rest of the insane in custody, supplemented by private sanatoria, by makeshift accommodations in the jails, by farming out the insane with the paupers to the lowest annual bidders, by releasing the insane on bond to their relatives and by other means. Of course there are many undiagnosed insane at liberty. In dealing with these problems, one should bear in mind the almost similar problems of the feeble-minded and of the epileptic, problems usually solved less well. Now let it be said to the credit of the keepers of the county jails and the keepers of the county poor farms that they realize their own incompetency and the lack of local facilities for the proper care of the insane sent to them, and they would gladly have the insane portion of their population removed from their institutions and transferred to the state hospitals for the insane. Many of the other county officials who are not in daily contact with the insane, such as the members of the county court, and many of the state officials such as the members of the legislature seem to express slight interest in the insane and then only from the point of view of local economy of maintenance.

It has often been said that the greatest advantage of keeping the insane and feeble-minded in their own counties rather than in large state institutions is that they are more frequently visited by their relatives. But are they visited or are they neglected by their kin? In almost 1,000 cases where this phase was studied, it was found that 60 per cent. had not had one single visitor in the preceding year. Also it is often said that the county care is cheaper in maintenance than the state care. The present and the potential economic status of 558 individuals in thirty county institutions was studied. At present they are practically languishing unoccupied, except that a few do some chores or housework, the total value of which is estimated to be worth about \$300 a month. The earning capacity of these same 558 individuals was estimated as if they were in institutions suitable for the care of their respective mental

diseases such as large state hospitals with the shops and farm colonies ordinarily found in the better state institutions. Two hundred thirty-one would be helpless, forty-seven would earn their maintenance only, and 270 would earn \$2,527 a month above maintenance. The extravagance of the county care is greatly increased by the frequent discharges from residence in the institutions of defectives of child bearing age and by the lack of adequate segregation within the institutions resulting in the increase of the number of defectives who must always be a public burden.

*County Care of the Insane in 1917.*—The county is forced to assume the responsibility of those of its insane that the state does not admit into its crowded state hospitals. Some of these unfortunate insane are kept in jail for a long or short time, usually from a few weeks to a few months but in some cases for years. In jail they are treated like prisoners, either in solitary cells or mingling with the prisoners who terrify them. Also because of the lack of diagnostic clinics in conjunction with the courts, many undiagnosed insane and feeble-minded are sent to jail as criminals because of their antisocial acts, and if these men and women are strong and in good health, they may be sent to the workhouse or sent out on the road in the chain gang. In jail the insane are attended by the jailor or by a "trusty" prisoner, but there is neither matron nor nurse. Where men and women are in the same jail, decency is offended by talk and by actions and illicit relations between sane or insane or feeble-minded prisoners through iron-barred doors sometimes occurs and there have been cases where the jailors took advantage of defective women prisoners. There are no means of close watch to prevent suicide of mentally depressed prisoners. There are no facilities for caring for the acutely disturbed insane such as hydrotherapy or facilities for feeding the resistive. In one jail the county physician was giving a man with katatonic excitement ten grains of potassium bromide three times a day; the doctor said that the patient was starving to death and that within his memory three insane prisoners have died in that jail because of lack of proper facilities. Many of the jails are dangerously unsanitary for the sane who can assist in their own care, and therefore their use for the insane is to be deplored. In the jails the insane have no occupation, diversion nor encouragement. In fact, they are only sheltered and fed and no remedial treatment is given them.



At the county poor farms there are many kinds of public dependents such as the insane, feeble-minded, epileptic, indigent, sick, senile, infirm and deserted women and children. There are over 400 insane persons in the rural county farms in this region! What care do these insane receive from society and under what conditions of custody are they kept? The insane are not under the care of physicians and nurses especially trained in the care of the insane; in fact they receive only such nursing as the farmer or superintendent and his family can give them, supplemented by the attentions of the other inmates under the intermittent direction of the county physician who comes only when called. No county physician or health officer is trained in psychiatry. No county farm has even one nurse. The kindness the insane receive depends on whether the superintendent is gentle or abusive, experienced or ignorant, a good husbandman or thriftless. The conditions of custody vary greatly in the different counties. In some places the county has built better buildings than in others and on better farm land and provides more liberally in such matters as food and supplies. There is no one type of county farm, so an outline description of a few will give a general idea of them.

County 1. C. Unfortunately for the healthy interest of the community in its county poor farm, the farm is in a secluded place. It is five miles from the county seat and it is one and a half miles from the pike. There are seven small cabins each having two rooms with accommodations in each room for two inmates. The cabins are unpainted but they are clean and neat and have a long low porch or veranda. In each cabin is a wood stove. One building is of different design and is for the keeping of the insane. During the day the inmates of the farm mix indiscriminately without segregation of sex or of race and they assist in the chores and in the housework. At night there is segregation. However, one feeble-minded woman here has a deformed idiot illegitimate daughter born and bred on this farm. The total public expense of maintaining for her whole lifetime this poor unfortunate creature who never should have been born is greater than the expense of providing adequate segregation of the sexes on this farm. One couple here deserve more than passing mention as they were pointed out as an example of romance like a bright spot in the dark. He is an old man who has been here fifteen years. Twelve years ago or three years after his admission, she came here. She is a

childish old woman and the diagnosis in her case is the same as in his case, namely, senile dementia. They met here and became engaged and some day he plans to go to town and get the papers so that they can marry. They occupy the same room in the same cabin, and they live apart. He gathers wood for her by day and she cooks for him. But one wonders what may follow this precedent of unmarried men and women living together at the poor farm, and one also wonders what were the precedents of this incident for this couple were not looked on askance. At this farm there is a patient with epilepsy who is not receiving any treatment not even a modified diet. The county health officer had not visited the poor farm in the last quarter of the year. The building set apart for those recognized insane is called the county asylum. It is a one story, octagonally shaped, wooden building with a foundation of stone pillars. In the center is a wood stove and around it are eight cells. The door to each cell is of iron bars and meshes as in a jail. Each cell has a barred window and in each cell is a water toilet seat. In this asylum are kept male and female insane and unless they are violent the cell doors are not locked so that at night they can come nearer to the stove to keep warm. In one cell lying on a mattress bed on the floor with wet bed clothing and with his head resting against the toilet seat for a pillow lay an old man who was paralyzed—diagnosis cerebral arteriosclerosis with softening. The keeper of this asylum is not insane himself; he is a negro inmate with tuberculosis. The inmates receive neither curative nor palliative treatment and have no occupation nor diversion. One of them was asked what he did and he replied that he helped sit around.

County 1. B. Of all of the counties not containing large cities this county has the largest poor farm population and its asylum is reputed to be the best in the rural districts. On the farm are many small cabins and houses and in them are some undiagnosed cases of insanity. The asylum is a new brick and cement and iron building. The county officials who built it are very proud that they spent on it only about three-fourths of the money appropriated, but the lack of equipment causes now and for generations may cause the inmates suffering. The asylum is a long building with a hall way down the center and with six or seven rooms on each side. In the hall are two stoves inside iron cages but the doors of the cages are open. Each room has a small window through the outer

wall, two plastered walls, iron bars as in jail cells for the front wall, no running water, a ledge under the window with a hole in it for a toilet seat, and a bed or a mattress on the floor. There is no privacy of sight, sound, or smell. This building is used for women but at the time of the visit of officials there were about a half a dozen white and negro insane and feeble-minded and infirm men loitering in the hall. There is no nurse nor attendant in charge. There are no facilities for bathing. In the wall from the outside there are little holes in which are small graniteware bed chambers which are placed under the toilet seats; some of the negativistic and feeble-minded insane do not use these chambers successfully and urine and feces form puddles under the barred but unscreened windows. Some of the beds are but masses of stinking wet, ragged blankets on straw ticks. One noisy katatonic dementia praecox was found in a stenchful wet bed although it was alleged that her bedding was changed every day. Two acutely disturbed patients had recently been returned to county care from the state hospitals as incurable. They were returned because it is cheaper for the county to keep them in this prison than in the state hospital, for here the maintenance is only \$45.00 a year, whereas at the state hospital where they might receive intelligent treatment and adequate care the maintenance is \$135.00 a year; these two human souls doomed to a life worse than any conception of life after death to save the county \$180.00 a year. The county officials are very proud of their economical system of county care. Two acutely insane men are kept in cement floored iron barred cages in a dark, damp barn. The county health officer comes once or twice every three months. Up the hill is the burying ground.

County 2. E. There are several buildings on this farm but no asylum, as the superintendent said there are no insane here. This is a prosperous county, and there is a new building called the infirmary for the physically sick. The infirmary is of brick and wood and is well heated, but there is no running water and the windows are not screened. There is no nurse and there is no way in which modified diets can be prepared for those who are sick with nephritis, tuberculosis or pellagra. In a room with closed windows is a man with acute tuberculosis. One man recently pardoned from the state prison is convalescing from a broken leg. One woman admitted the day before is in an un-

screened bed. She has acute pellagra with stomatitis and diarrhea and with severe skin lesions of the hands with secondary infection. The superintendent of this farm is a kindly, bright old man, formerly constable and road supervisor, and among his duties now is the care of the sick. Most of the inmates occupy a long "L" shaped building or home. This is of frame, old, deteriorated, crowded, badly ventilated, and overrun with vermin of several kinds. There are single rooms on both sides of the long hall that runs the length of the building. There is no adequate segregation, and here is found the senile, the senile insane, the feeble-minded children, the feeble-minded adults, the infirm, and the deserted dependents. The more able inmates try to care for the others. There is no nurse here although every one of the twenty inmates needs constant medical attention. In one room was a woman in bed recovering from influenza and there were three other inmates in her room sitting about the stove. In another room was a demented paralyzed woman, diagnosis, cerebral arteriosclerosis with softenings. She could not move nor talk, but she had been placed in a rocking chair and her wet and stained nightgown was so torn that she was exposed. Beside her was her husband, who takes care of her when he is not gardening. He was an ignorant simple old man with soil stained hands and he could not recall her maiden name, nor when they married. In the door of another room was an old man in wet clothes sitting in a rocking chair under which was a puddle of urine soaking into the rotting, stained floor, a case of postapoplectic dementia unable to take care of himself. In his room were two young men. One was feeble-minded and had leg ulcers, the other is normal minded but has both legs paralyzed; the former waits table, and the latter cooks. There was here one family of three generations consisting of five individuals, all feeble-minded. In the last room was an idiot woman of 30 to 35 years of age with a mind always like that of a baby of two years. Her father was alcoholic. Over her hands and arms were stockings so she could not bite her fingers. She was in a bed that did not have the raised walls of a crib bed. So that she would not fall out of bed, she was crucified, i. e., each wrist and each ankle was tied to a corner of the bed, and over the bedding were two tight cords, one over the chest and the other lower over the body. She cries all the time. At night she is locked in alone, but every morning she is bathed and the bedding changed by another inmate



woman, a low grade moron. Across from her room are the two bathrooms with bath tubs and running water and beyond these are the dining room and kitchen. In this institution were twenty inmates, three of them insane and five of them feeble-minded.

*Points of Diagnostic Interest in Psychiatry and in Clinical Medicine.*—In practically every county institution there may be found interesting cases of physical or of mental pathology, deserving accurate study and scientific treatment. Of course every case in an institution has a more or less interesting history from the point of view of sociology, but this phase will not be emphasized here. Many of these cases could well be used for clinical instruction if circumstances were favorable.

In certain regions, trachoma is very prevalent and is increasing in frequency. The United States Public Health and Marine Hospital Service has a chain of small hospitals solely for trachoma. Once started in county institutions, trachoma spreads rapidly and unchecked. Typhoid, malaria, and pneumonia are of frequent occurrence at certain seasons. Syphilis is common among the negroes but paresis and tabes are less frequently found than the cerebral endarteritic form with its early hemiplegias. Laboratories and treatment are practically unknown. Hereditary syphilis and degeneracy among the negroes are very difficult to diagnose because of the confusion of the respective stigmata with morphology of a mixed race.

Pellagra in its several forms is often found in county poor farms. Because there is no opportunity for variations in diet, the pellagrins, like the nephritics and the diabetics, etc., languish without the aids now known in medicine.

Among surgical conditions may be mentioned pelvic lacerations, hernia, inoperable and operable carcinomata, all neglected.

Among medical conditions may be also mentioned myxedema, cretinism, infantilism, epileptic burns of many years duration still discharging pus, prostatitis, cystitis, ulcers, hookworm, pernicious anemia, vicarious menstruation, etc. Among the mental diseases cerebral arteriosclerosis, presbyophrenia, dementia praecox, and feeble-mindedness are the most common, but there may also be enumerated manic depressive insanity, paraphrenia, perversions, paresis, alcoholism and morphinism with their sequellae, brain tumor, brain trauma, Friedrich's hereditary ataxia, multiple sclerosis, paralysis agitans.

If I may dare to state this observation with-

out presenting many thoroughly studied cases to prove my point, in the negro with dementia praecox apathy is relatively less frequently found as an end stage, probably because the negro is characteristically rather ebullient in temperament.

*Estimates and Relief.*—It is estimated that over 10 per cent. of the insane now supported by the public, i. e. about 600 in this particular region, are county charges, and about twice as many feeble-minded are in the county poor farms and jails, and that there are about 200 persons who should be in a hospital for the criminal insane, and about 300 epileptics; all these in a state with a population of about 2,300,000. Hence with a system of state hospitals, too small to admit all those needing such care, supplemented by the use of the county institutions, fully 1 per cent. of the entire state are public charges and receive from the public treatment which is a discredit to the public and which is inadequate and frequently inhuman to them. That county care cannot be made satisfactory, is the point of this paper to this audience of physicians. Full state control of the insane with adequate financial support and with the realization that insanity is a community problem is far better and almost satisfactory. Ultimately, it is hoped there will be federal control of the insane and this war with its nation wide control of man power and of industry paves the way for it. With federal control of insanity similar to federal control of immigration, quarantine, etc., the insane of this and of future generations will receive the best of custody and of care in every part of the United States. The immediate needs are better medical training, better national health and knowledge of present conditions. Humanitarianism is more important than local interests. Medicine alone is constructive and universal in spite of war. County care of the insane must now be replaced by full state control.

#### DISCUSSION.

DR. ALBERT M. BARRETT: The paper of Dr. Hulbert's should be of much interest to us in that it shows the very striking contrasts that exist in the care of the insane in this country. It gives us a present day illustration of conditions which are of historic interest in that our modern methods of caring for the insane have passed through stages fully as distressing as those which Dr. Hulbert has shown here. The encouraging feature is that such conditions are now rare and exist only in those parts of our country which are backward in their social and educational development. I have no doubt but that conditions fully as primitive as those surrounding the care of the insane might be found in

the same communities in other social problems. It is furthermore encouraging to note that there are organizations in this country that are trying to better conditions and the means that they have chosen of bringing to public attention existing conditions must result in lasting improvements. If there is any one thing we must hold to in our attitude towards the insane, it is that insanity and mental abnormalities are medical problems. In communities where this is not recognized, one cannot expect any improvement in conditions.

## REPORT OF TWO CASES WHERE THE SYMPTOMS SEEMED TO BE DEPENDENT UPON DISEASE OF THE TEETH.

NELLIS B. FOSTER, M.D.

(From the Medical Clinic, University Hospital, Ann Arbor, Michigan.)

There are certain fashions which creep into medical practice and it is with considerable reluctance on that account that I report these two cases because I am afraid that inferences may be drawn from them. I report them without diagnosis. If you wish to make diagnoses from the evidence, it is your privilege.

The first case is that of a man 31 years old who came into the Hospital on the 29th of August, 1916, complaining of chills and fever. He had daily such violent chills that he shook the bed. Following each chill he would have a temperature rising to 104 degrees and on one occasion 106 degrees. He had had some weeks before he came into the hospital an acute urethritis. He had at the time he was here a very mild posterior urethritis. On account of his chills and fever, the presence of a slight heart murmur and our inability to find any other cause at the time for his infection, we made a tentative diagnosis of a gonorrheal septicemia. Numerous blood cultures failed to demonstrate this type of septicemia or, in fact, any septicemia. He had a leucocytosis of about 20,000 at the time of each chill and fever. In the afebrile period there was no leucocytosis at all. Because we were unable to substantiate our first diagnosis, we began to seek further evidences of a focus of infection. We were unable to find anything of note in his examination. He was an unusually robust looking man when he first came in here, although he had lost twenty pounds in weight before coming. We were unable to find anything excepting quite a marked degree of pyorrhea and his X-ray picture showed that there were some pus pockets about the teeth. His temperature is of considerable interest because in my experience it is as marked and typical a septic temperature as one sees. It began on the 29th of August and continued until about the 13th of October. On the 12th and 13th of October we began to take out the teeth that were infected with the result that there was very promptly a change in the character of his temperature chart. That is the only thing we did for him.

His fever began to break, and he was discharged

from the Hospital on the 30th of October feeling very well indeed. I know his subsequent history for I have seen him within the past month. When he left the Hospital he weight 136 pounds. He now weight 180 pounds. He looks and says he is in perfect health.

If you care to draw deductions from the case you are free to do so. I feel rather confident myself that they are warranted, although the evidence in cases of vague infections of this kind is not sufficiently strong to enable us to say that we have proved scientific data.

The second case is that of a woman 35 years old who was sent to the Ophthalmologic Clinic in January of this year by Dr. Abbott of Albion. Her history until just previous to the time she came to the Clinic is not of particular significance. She had had a couple of attacks of bleeding gums and on account of this her physician had advised the extraction of one or two teeth, after which she had bled rather freely. At a subsequent attack of bleeding she felt rather ill but got better without any particular trouble. In December, 1916, she began to feel out of health and noticed that her eyesight was becoming poor. From that time on her eyesight progressively became worse until she was admitted to the Hospital. I first saw her at that time. She had bleeding gums and a bilateral optic neuritis of such a degree that her eyesight was impaired completely. She could distinguish between light and darkness but otherwise had no visual sense whatever. At that time on account of the bleeding gums and the fact that she had a few purpuric spots on various portions of her body, it was suspected that the case was one of purpura, (whatever that may mean). We all wondered if possibly it might be scurvy, but upon questioning her it did not appear that she could have scurvy since she ate preferably an anti-scorbutic diet.

She was transferred from the Ophthalmologic Clinic to the Medical Ward. She bled alarmingly from the gums. In the course of twenty-four hours there was on one occasion a pint of the clots. We gave the various treatments that one would give in endeavoring to stop hemorrhage, serum, etc., without anything but temporary results. She had no fever, nor leucocytosis. The picture was to me a new one and extremely obscure. After a little while she developed some fluid in the right chest and later fluid in the other chest. Inasmuch as it seemed imperative, in order to save her life, that something be done to stop the hemorrhage, for the hemoglobin had gone down to 20, we entertained the idea of removing the teeth. Now this was not done because we thought that the teeth were the cause of the trouble, but as an immediate urgency method of relieving her condition. We could not tell the actual condition of the teeth at that time. A couple of the worst teeth were removed with the result that the woman nearly bled to death. All the methods that any of us could think of failed to control the hemorrhage and when it finally did stop it apparently did so of its own accord. A few days later she developed a pneumonia which was an intercurrent thing and we thought would close the picture. She



Short 1

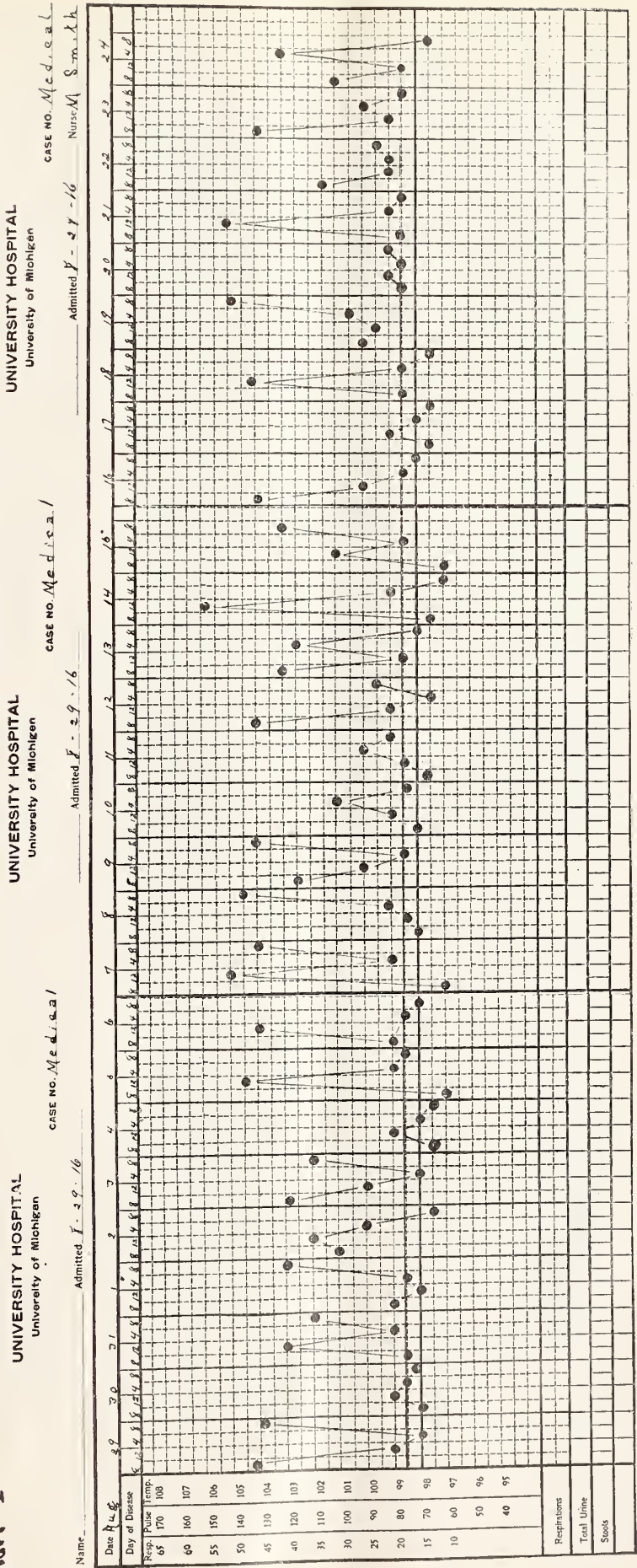
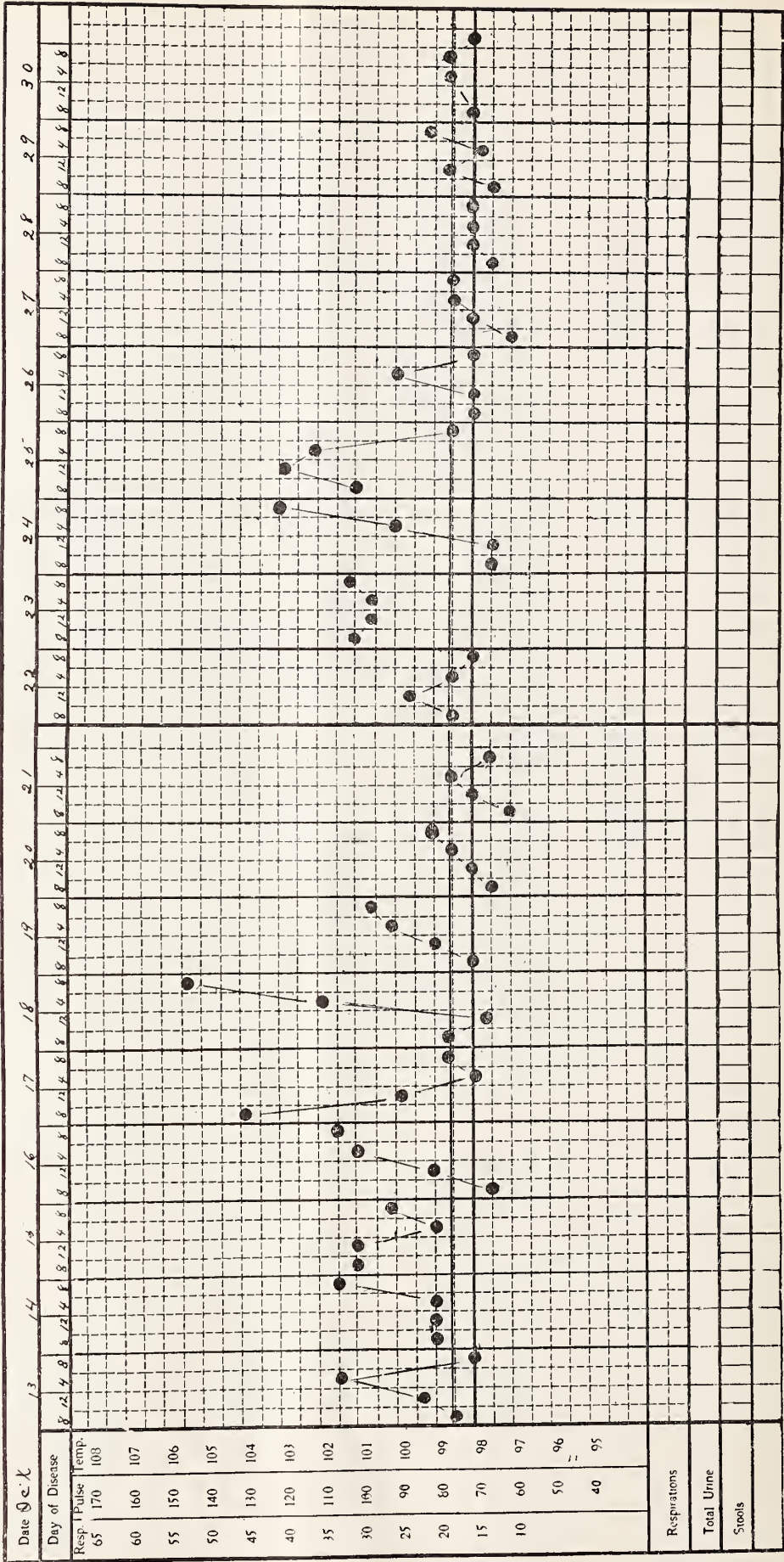


Chart. 11.

UNIVERSITY HOSPITAL  
University of Michigan

UNIVERSITY HOSPITAL  
University of Michigan

Name \_\_\_\_\_ Date of Disease \_\_\_\_\_  
CASE NO. M 8 Admitted 8 - 29 - 16 Nurse M. Smith  
CASE NO. Med. 1021 Admitted 8 - 29 - 16 Nurse M. Smith





defervesced promptly on the third or fourth day and continued to improve.

Profiting by our previous experience, we decided that no more teeth could be removed without preparing for it. It was decided by Dr. Lyons that the teeth should be removed. So after that the patient was prepared for each extraction by blood transfusions. Fortunately her husband was a suitable donor and she was transfused from him. When she was prepared, Dr. Lyons extracted two or three teeth at a time. At one time four teeth were extracted. So we got all of the teeth out finally.

Her blood, so far as we could determine was normal. Her bleeding time was normal. Her clotting time was normal. At this time I became interested in certain blood changes which are supposed to be more or less dependent upon infections, that is the reversal of the albumin-globulin proportions. Dr. DeKruif made the determination for us. In animals when there is infection, the ratio of the albumin of the globulin changes so that the blood protein becomes predominantly globulin rather than albumin. That is the condition we found in this patient. The significance of this fact we are not prepared to state, because this reversal is probably found in other than infectious conditions. That is all the scientific evidence we have on the case.

After she had been in the Clinic six weeks or two months, she began very gradually to regain her eyesight. At first there was no apparent change in the optic nerves that one could make out. Dr. Clay examined her repeatedly at short intervals and at the time when she could count fingers Dr. Clay thought that there was no change which could be seen in the retina. Her progress was very slow but constant. Barring the setbacks which she had, her constant trend was toward recovery until for the last two months she has been able to read newspapers but she has abstained from this because she was afraid of eye strain. She has written letters to her family and has read the letters they have written to her. Except for a slight blurring she cannot see that her eyesight has been impaired.

Another very curious thing is that each time the teeth were extracted, fluid returned to the pleural cavity to such degree upon two or three occasions that we did a paracentesis, taking out a liter of fluid. Slowly, as the symptoms subsided following the extraction of the teeth, the fluid would be reabsorbed.

That is the whole story. In my experience I have never seen anything like it. I have gone through the literature and have found nothing like it. One may call it purpura. It is a tendency to bleed. She hasn't hemophilia. In some obscure way there seems to be some association between the general nutritional disturbance, the eye changes and the local condition in the teeth.

#### DISCUSSION.

Dr. GRADY L. CLAY: The second case which Dr. Foster reports is one of the most interesting cases which we have seen in the Clinic. At first when she entered we made a diagnosis of bilateral venous thrombosis. That diagnosis was made because she

had such marked engorgement of the veins with very little edema of the nerve head, because the physiologic cup was still present and also due to the fact that she had almost sudden loss of vision. But after a few days observing her fundus, it was found that on pressing the eye-ball we were able to empty the veins. This, of course, ruled out double thrombosis. We then decided that it was an unusual case of toxic neuroretinitis. The patient's vision gradually improved after she had had a number of teeth extracted, and when we saw her last before she was discharged, her vision was practically normal,  $7\frac{1}{2}$  in each eye, and her visual fields were almost normal. Of course, it is hard to explain this unusual neuroretinitis except on toxic grounds. She had marked hemorrhages with unusual engorgement of the veins. The veins were about twice their normal size while the arteries were small and contracted. She recovered without any scotomata at all.

Dr. JAMES G. VANZWALUWENBURG: I should like to ask whether all these teeth were infected, or whether only certain ones of them were, and whether her improvement proceeded pro rata with the number of teeth extracted, or whether she improved more after certain extractions. These teeth infections are generally confined to a few, rarely general, and it seems possible to me that her improvement might have been by stages.

Dr. CARL D. CAMP: I would like to say that I had a case in the Neural Clinic which showed an apparent pneumonic condition following the extraction of teeth for pyorrhea. This patient complained of vague pains in various parts of the body and was in the Neural Clinic with the diagnosis of neuritis. Following the extraction of some teeth he developed what Dr. Hewlett diagnosed as pneumonia, but which cleared up in about four or five days. He then had some more teeth extracted and developed another attack of pneumonia. I would like to ask if Dr. Foster has any explanation for the relation between the lung and the teeth.

Dr. FOSTER: In answer to Dr. VanZwaluwbург's question, I don't know that our therapeutic measures were well adapted to bring out the stages. The teeth that were most in need of being extracted were the front teeth. On account of the length of time that she had had bleeding before we attempted to do anything, she had of necessity neglected her teeth and had not used a brush and it was Dr. Lyons' opinion that, while perhaps the back teeth were not all bad, they better all be taken out. So we started systematically a routine of building the patient up, infusing her and taking out the teeth. After the first storm we knew what to expect. Her progress was very gradual, hardly perceptible from week to week, but it seemed to be steady from month to month, and it did not seem to be related at all to the extraction of any particular teeth. Of course, the worse teeth were taken first, and perhaps that was all that was necessary. So I don't believe we can answer that question very definitely.

With regard to the attack she had which was called pneumonia, no cultures were made and we are not inclined to be dogmatic. I believe myself that that was a pulmonary infarction because the whole picture is that which would predispose to a pulmonary infarction. We didn't think so at the time but afterwards in discussing the condition, we be-

lieved that it was a pulmonary infarction. The very mildest attack of pneumonia would have carried off a patient in her condition. Pulmonary infarctions do give all the signs of pneumonia and they are transitory. The infarction can be very small but the area of edema and consolidation about the focus may be of a considerable area. The actual fibroid area might be no larger than a cherry, but the signs might be as large as a dollar. I think such conditions are infarctions without a doubt.

## REPORT OF TWO CASES OF RETROPERITONEAL HEMATOMA FOLLOWING THE PURSE-STRING WATKINS OPERATION FOR CYSTOCELE.

RUDOLPH A. BARTHOLOMEW, M.D.

(From the Obstetric and Gynecologic Clinic, University Hospital, Ann Arbor, Mich.)

The operation of choice in the great majority of women who have reached or passed the menopause and who are suffering from cystocele associated with more or less prolapse, is the Watkins interposition operation.

Briefly, the technic of the operation consists in the separation of the bladder from the anterior vaginal wall, after which it is separated from its attachment to the anterior surface of the uterus and pushed up until the vesicouterine fold of the peritoneum is reached. The peritoneum is then opened and the fundus of the uterus drawn out into the vagina and sutured to the anterior vaginal wall from the fundus back to the cervix.

The edges of the peritoneal opening through which the uterus is drawn adhere quickly around the lower part of the uterus. The bladder in its new position upon the posterior surface of the uterus, in turn is supported by its broad area of attachment to the anterior vaginal wall.

Hence by the one operation, both the prolapse and the cystocele are cured. However, if the patient has not reached the menopause and is still menstruating, the uterine end of the tubes must be cut and buried, since the occurrence of pregnancy after such a radical change in the relation of the parts, would be attended by very serious consequences.

The same condition of partial prolapse and cystocele, but to a lesser degree, is sometimes found in younger women and frequently associated with retroversion. Such patients are still in the childbearing period and do not wish to have their condition relieved at the expense of being sterilized. For such cases, a modification of the Watkins operation, sometimes called

the purse-string Watkins, is found to be very satisfactory.

The essentials in the technic of this operation consist in the separation of the bladder from the anterior vaginal wall, after which it is separated from the anterior surface of the uterus and pushed up only about half the distance to the vesicouterine peritoneal fold. A chromic suture is then placed in a circular manner around the under surface of the flaps of the anterior vaginal wall and including the anterior surface of the uterus at the level to which the bladder has been pushed. After this has been drawn up and tied, the excess vaginal mucosa is cut away from the flaps and the edges united from side to side and to the uterus down to the cervix. The operation is then completed by a repair of the perineum and a shortening of the round ligaments if indicated.

By this method the bladder is fastened securely at a higher level and there is no disturbance of the relation of the bladder and the uterus such as would contraindicate further pregnancies. The cystocele is not as likely to recur as in case of the ordinary anterior colporrhaphy which is done by simply cutting away the redundant vaginal mucosa covering the cystocele, and uniting the edges without pushing up and fastening the bladder at a higher level.

The performance of both the Watkins and the purse-string Watkins is complicated in most cases by very free bleeding from the raw surface of the vaginal and bladder walls, and, as the following cases will show, it is exceedingly important to control securely all bleeding before closing the wound.

In the Watkins operation if there is some persistent oozing which cannot be satisfactorily controlled by hot packs or ligatures, a small cigarette drain properly placed will give free exit to the blood and prevent the formation of a hematoma. In many of the cases the blood probably escapes into the pelvic cavity under the edge of the peritoneal opening through which the uterus is drawn, and is slowly absorbed. However, in case of the purse-string Watkins operation there is no exit above for blood since the upper half of the vesicouterine attachment is still intact and there is no exit below, as this would sacrifice the effectiveness of the purse-string suture. Hence the added importance of thorough control of bleeding in this type of operation.

The postoperative course of these operations is usually uneventful except for a slightly greater degree of fever than usual, due probably to



absorption of free blood and a slight degree of infection of the pelvic peritoneum. There is usually some difficulty in urination for twenty-four to forty-eight hours probably due to the trauma of the bladder and this may necessitate catheterization several times.

Should bleeding continue between the purse-string suture and the lower level of the vesico-uterine attachment, the gradually enlarging hematoma would tend to exert a marked pressure on the base of the bladder and tend to extend around to either side or above the bladder as a retroperitoneal hematoma following the line of the least resistance.

Although this operation has been done frequently in this Clinic it was only recently that the occurrence of two such cases served to call attention to the possibility of such a complication, as will be seen from the following reports.

Mrs. D., age 43 (Gyn. 7586) was transferred from the Medical to the Gynecological Department October 3, 1916. The patient spoke very little English so the history was unsatisfactory. There was nothing of importance in the previous history except the fact that she had ten living children and had come to the Hospital on account of backache and a heavy feeling in her abdomen. Her periods had been regular and normal up to the time of admission to the Hospital. Abdominal examination was negative; vaginal examination showed marked external and internal laceration of the perineum with large cystocele and rectocele, bilateral laceration of the cervix, uterus in retrocession, normal size, freely movable, not prolapsed, and appendages normal.

Under ether, October 6, 1916, the pelvic condition was found to be practically the same, and a dilatation and curettage, purse-string Watkins and perineorrhaphy was done. No more than the average amount of bleeding was encountered and this seemed to be readily controlled. Convalescence was normal except for persistent complaint of pain over the bladder region and inability to void, which required catheterization for the first four days. At the time of discharge from the Hospital on the eighteenth day, examination was negative except for some tenderness over the bladder region. However, no tumor was palpated.

The patient returned to the Clinic four months later, February 20, 1917, complaining of soreness across the lower abdomen, especially over the bladder region. The menses had been normal, the last period occurring February 13th. Abdominal examination revealed an indefinite mass reaching just above the symphysis in the midline and rather deep. Vaginal examination showed the uterus apparently enlarged about the size of a two months' pregnancy but of firm consistency, slightly irregular and quite movable. The appendages were normal.

Examination under ether on February 27, 1917, revealed the same findings, but on opening the abdomen, a round tumor about the size of the fist was seen lying above the uterus in the midline partially covering the bladder and blending rather closely with the outline of the uterus. It was retroperitoneal

and easily enucleated from the surrounding adherent peritoneum, uterus and bladder. The cavity was obliterated by sewing the peritoneal flaps back into place. The uterus and appendages were quite normal. Closer examination of the tumor showed it to be an encapsulated mass of semisolid blood clot and microscopic examination showed nothing but blood clot with hyaline walls, areas of blood pigment deposit and numerous phagocytes. Convalescence was entirely normal and the patient's condition has since been much improved.

Mrs. C., age 31, (Gyn. 8213) mother of four living children, came to the Hospital because of headache, nervousness, weakness and a feeling of loss of support. Previous history was negative and the last period occurred April 17, 1917. Abdominal examination was negative. Vaginal examination showed considerable laceration of the perineum, with marked cystocele and rectocele, bilateral laceration of the cervix, uterus in normal position movable and negative and appendages normal. There was only slight tendency to prolapse.

On May 1, 1917, under ether, examination showed the same findings and a dilatation and curettage, purse-string Watkins, and perineorrhaphy was done. There was very free bleeding during the operation and numerous vessels were ligated. For the following six days the patient was unable to void and had to be catheterized. There was great difficulty in passing the catheter and it apparently encountered some obstruction. The patient complained severely of pain across the lower abdomen and on the eighth day following the operation a firm, fixed, and rather tender mass could be felt arising from the pelvis and extending about four finger breadths above the pubes in the midline and above Poupart's ligament half way to the right anterior superior spine and about two finger breadths to the left of the midline. The patient was able to sit up and walk at the usual time although at the time of discharge from the Hospital on the fourteenth day, she still complained of pain across the lower abdomen and some difficulty in urination. Examination showed the incision well healed, but the pelvic organs could not be satisfactorily outlined on account of the mass present which had not decreased in size.

A letter was received from the patient two weeks later, stating that she still had painful and difficult urination and pain across the lower abdomen. She was advised to return for examination and removal of the mass which undoubtedly was the cause of her trouble. The symptoms and findings indicated very definitely the existence of a large retroperitoneal hematoma and if the patient returns for the operation the mass will undoubtedly be found to be of this nature.

Such a hematoma could probably be readily removed by the extraperitoneal route but the advantages of better inspection, more thorough removal and restoration of the parts to their normal relations make the abdominal route preferable. To attempt removal by the vaginal route would favor recurrence of the original deformity.

In conclusion, it cannot be too strongly emphasized that the prevention of a retroperitoneal hematoma following a Watkins or purse-string

Watkins operations lies in the most thorough control of bleeding and, in case of doubt, it is much safer to insert a drain.

Note.—Several weeks after reporting this case, a letter was received from Dr. Ernest K. Cullen of Detroit, Mich., stating that he had just operated upon this patient and on opening the abdomen had found a hematoma about 10 cm. in diameter behind the peritoneum between the bladder and the uterus. The tumor had extended outwards between the layers of the broad ligaments and had also dissected up the peritoneum half way to the top of the fundus. The blood clot was cleaned out and the cavity closed and drained.

#### DISCUSSION.

DR. REUBEN PETERSON: I haven't much to add. The doctor has brought out the danger in this type of operation. One is apt to be a little careless or hasty in stopping hemorrhage in these vaginal operations, and yet there is a real danger of post-operative oozing which may cause what has been described. I have had one hemorrhage following the removal of an ovarian cyst where the hematoma was retroperitoneal and the blood was let out by an incision extraperitoneally above the bladder. Caution should be used to see that absolutely all hemorrhage is stopped. One is apt to get too far over the side in the region of the big veins, and in spite of apparent hemostasis, there is liable to be subsequent oozing, followed by the condition described in this paper.

### LATE RESULTS IN SPLENECTOMY.

QUINTER O. GILBERT, M.D.

(From the Medical Clinic, University Hospital, Ann Arbor, Mich.)

During the last four years splenectomy has been performed many times in this country chiefly on patients suffering from the various forms of hemolytic anemia. This has been especially true in pernicious anemia. The careful study of the postoperative histories tells us the value of the operation as a clinical procedure in the various forms of blood diseases. Of special value is the study of the changes which occur in the blood, because these observations have and are throwing additional light on the role and function of the spleen.

A year ago I reported some observations on the blood of two patients from the Medical Clinic, who had had their spleens removed by Dr. Darling. Recently we have had the opportunity to study again the blood of these patients. It is our intention at this time to speak

of these changes and the results of splenectomy in these patients.

Patient I (15-1508) had been sick since December, 1914, his symptoms being those relating to his anemia. There had been two remissions in his condition up to the time of the splenectomy in February, 1916.

The clinical results obtained in these cases are in accord with those reported by other observers. Balfour (2) says that when extensive cirrhosis has occurred in splenic anemia of the Banti type the best results are not to be obtained, although splenectomy early in this type of disease is curative. In general the more chronic the disease has become, the less favorably will the patient react.

Krumbhaar (3) in a statistical study finds that, as a rule, the improvement following splenectomy in pernicious anemia is not permanent. Patients who have been operated upon before the disease is well advanced have done better. If the spleen is much enlarged the chances are better; the same is true of the prognosis if the patient is over 50 years of age. There is some reason to believe that splenectomized patients, in pernicious anemia, react better to blood transfusions and the converse holds true, that those persons who react better to blood transfusions, show the most marked improvement following splenectomy. This points to the condition and reaction of the hematopoietic system in the government of which the spleen seems to have some function.

As before stated, splenectomy is curative in early Banti's disease before excessive cirrhosis has occurred. In congenital hemolytic jaundice the experience of numerous observers (4) suggests it as a rational procedure. Griffin (5) has found that with three cases of syphilis of the spleen, where the patient had a severe anemia, which was not improved by antisyphilitic treatment, splenectomy was apparently curative.

We are much interested in the blood cell changes, following splenectomy in these two patients, because of the significance these blood changes may have to the function of the spleen. We found, as has been observed by others, a tremendous bone marrow stimulation immediately after operation, as evidenced by the marked leucocytosis, the increased nuclear red forms and increase in the large mononuclear



and transitional groups. We were especially interested in the small nuclear particles (sometimes called Howell-Jolly bodies) more particularly their formation, character, source and significance. They are of interest only in that their presence in large numbers is definitely associated with the absence of the splenic function.

Now one year later we find the differential count very much the same, except for the increase in the lymphocytes and the marked increase in the number of nucleated red cells. The actual number of nuclear particles has remained about the same. One would think then that there must be a more essential factor in the blood cell destruction than the spleen. It would seem that the spleen has a very definite relation to bone marrow cell production, and as we previously concluded, it has a most definite relation to the maturing of the red cells, especially in the destructive metabolism of the nucleus of the red cells.

The evidence that the spleen plays a part in hematogenesis is more or less indirect. It seems however a reasonable conclusion from the evidence at hand that the blood cell changes are due to either (1) the removal of the spleen as a hemolytic organ or (2) that a normal inhibitor to bone marrow cell activity has been removed, thereby giving the apparent result of stimulation or (3) that, as the study of the nuclear particles suggests, the spleen exerts a rather than a quantitative effect in the qualitative production of the red blood cells. There seems to be a special function that the spleen has in the denuclearization of the young red blood cells.

It should be remembered that splenectomy was advised primarily with the hope of breaking or removing the principle factor in the hemolytic chain.

In these two patients who have returned to us after a definite remission we have now much greater evidence of hemolysis than before. The spleens were removed and both show marked evidence of bone marrow activity with the principal change in the large number of normoblasts with all stages in the formation of nuclear particles.

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#### DISCUSSION.

DR. NELLIS B. FOSTER: Only one word with regard to splenectomy in these cases. As our experience increases, the indications are becoming more and more definite. In early cases of Banti's disease considerable improvement can be obtained. In the later cases where cirrhosis has been established, not very much can be expected. In pernicious anemia I doubt very much the wisdom back of the furor for splenectomy. More and more such patients are coming back and it appears more and more that all that has been obtained is a remission. The experience with hemolytic jaundice shows that this disease may be cured. There are fifty-eight cases on record now, all of whom are cured or nearly cured. Definitely contraindicated is splenectomy in polycythemia. This has been done a number of times on patients with large spleens.

#### CLINICAL CASE REPORT: MALARIA.

HENRY S. BARTHOLOMEW, M.D.  
LANSING, MICH.

We have had in this vicinity during the past few years a number of cases that may have been malaria, and not infrequently unmistakable cases either probably or possibly imported. The following described case, however, is the first one I have encountered which leaves no room for doubt; it proves the presence of infected anopheles mosquitoes:

The patient, Vernon Shepler, 928 Penna. Ave., Lansing, was born in Michigan seven years ago, and for five years past has not been five miles from the State House.

July 19th, 22d, 24th and 26th he had a severe rigor followed by high fever; on the intervening days he played about as usual.

A blood smear made soon after the chill on the 26th showed the plasmodium vivax in many red cells; typical signet rings were plentiful as well as the other developmental forms of the parasite.

# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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Arthur M. Hume, Chairman.....	Owosso
Guy L. Kiefer .....	Detroit
W. J. Kay.....	Lapeer
W. J. DuBois.....	Grand Rapids

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### EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.  
Grand Rapids, Mich.

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All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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September

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### Editorials

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#### THE MEDICAL AWAKENING IN CHINA.

Announcement has recently been made of the grant of \$3,000,000 by the China Medical Board, established by the Rockefeller Foundation for the establishment of two medical colleges in China. One of these is to be located in Peking and the other in Shanghai. In Peking the Medical Board is taking over the Union Medical College previously supported by American and British missionary societies. In Shanghai the college will be a new institution but will carry on the work done in several schools in Shanghai, Nanking and other neighboring cities, which will be discontinued. Arrangements have been completed for the opening of the Peking College this fall, but the opening of the College in Shanghai will probably be postponed until after the end of the war.

Besides the establishment of these colleges, the Board plans to grant aid to a number of hospitals strategically located in different parts of the country, which will enable them to enlarge their staff and increase as well as improve their equipment. These hospitals will be re-

lated to the colleges so as to provide internships for its graduates.

The assistance of the China Medical Board will greatly strengthen the work of the missionary hospitals. The aim is to develop the nursing profession more rapidly than has hitherto been possible. It is also probable that much will be done to introduce the laws of modern sanitation and to give the people some of the principles of public health.

China, having a population of a quarter of the human race, is organizing a republican form of government. As we are fighting to make the world safe for democracy, it is right that we should cordially recognize the large share of this burden that China is carrying and gladly render such assistance as we may be able to give. We shall not be impatient if it requires a generation or two to overcome the initial difficulties that are inevitable.

In laying the foundation for the republic, it is most opportune that America can give China all that medical science can contribute to the building of a healthy people who after all are the nation, its wealth, its power and all its future.

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#### INTROSPECTIVE.

We ask that our members pause a moment and direct their attention and thought to a few pertinent matters relative to our state organization. We realize that you are burdened with many cares; added thereto are the demands that are being made for service with our National troops. Many doubtless are seriously debating what course they will take—the future to all is clouded by uncertainties. Notwithstanding we ask you to pause and ponder on the following:

At the Special Meeting in Battle Creek a special assessment of \$5.00 per member was ordered to create a Patriotic Fund for the aiding and care of dependents of enlisted members. Notice of this assessment has been given on two occasions in *The Journal*. County secretaries have been notified by personal letter and requested to make prompt remittances. To



date we have received \$500 from six societies. The sum should have been \$10,000.

The Battle Creek meeting recommended that County Societies appoint special Patriotic Committees to supervise the collection of data pertaining to enlisted men and their families. Notices regarding these committees have been published in *The Journal* and letters sent to county officials. Report blanks have also been forwarded with request that the information sought be promptly forwarded. To date eight county societies have appointed these committees and eleven reports on enlisted members sent in.

We have announced several times the desire to receive continued news and information regarding enlistments and members entrance upon active duty at home or "Overseas." To date we have received but three such reports.

We have written many letters and the most of them are unanswered. What information has been secured has reached us through the unofficial channels of the public press.

The foregoing has caused us to wonder why our members were neglecting to lend their co-operative support to the desire and effort on the part of state officials to cause our members to be recipients of organized assistance. Please remember a handful of men cannot achieve the ends sought or establish a definite plan of action. They are dependent upon each individual member's co-operation. We are again urging that each reader make it his duty to devote sometime each day and week to supply us with the following:

(a) The name of every member on active duty, his rank, location, dependents and their circumstances.

(b) Monthly reports on every enlisted member and his dependents so that we may be conversant with his and their progress.

(c) The appointment of Patriotic Committees in every county society.

(d) The collection and remittance of the special assessment.

(e) News notes and items pertaining to enlisted members.

May we awaken from our lethargy and from

now on exhibit that spirit and expend that energy as will cause our combined effort to accomplish that which our organization must accomplish in assuming its obligations to our members engaged in the service of Our Country. We await your personal response.

#### DRAFT EXAMINATIONS.

We have passed through a two weeks period of physical examinations of men who have been called by the enactments of the Draft Law. During that period we have seen 1,000 men and have noted the results of the physical tests. We confess to revolutionary experiences and have been impressed with the defects that have been encountered. Former opinions have been shattered and new actualities have taken their places. It has been a wonderful event that has stimulated a desire to see a group of analysis of the results and impressions of others who have served in like capacities. We would indeed desire a general tabulation and to that end invite correspondence.

A few of the striking facts encountered—one out of every six men had defective teeth that would disqualify. Some of these sets of teeth were merely decayed "shells" filled with food debris and decomposition. One out of every four men with defective teeth presented histories or signs of cervical adenitis, tonsillar infections and a heart lesion with more or less joint involvement with history of what the individual called "rheumatism." There is a crying need of education in the care of the teeth. The wonder is that with the average dental defects greater physical disease and constitutional disorders do not manifest themselves.

The prevalence of tuberculosis as imparted by recent survey statistics were not detected though special attention was given to pulmonary signs and symptoms. These boys were exceptionally free from pulmonary tubercular foci.

Inguinal hernia was frequently encountered. Many were only partial with the individual unconscious of the fact that the "lump" was a hernia.

A well marked varicocele, usually left, was found in one out of every four.

In one group of 500 one open syphilitic chancre and but six cases of acute gonorrhea were detected.

Undescended testicles were noted unilaterally in six and bilateral in two. One man was found to possess three testicles.

The average vision was good with a well established percentage of 20/20ths in one eye and 20/30ths in the opposite eye. Quite a few wore glasses who had normal distance and reading vision. On inquiry most of the "spectacle wearers" had been supplied with glasses by untrained or unscrupulous optometrists. But three cases of malingering as to vision were encountered and proven by examination with refracting lenses.

Hemorrhoids were infrequent as were also osteomyelitic diseases with discharging sinus. In 1,000 men there were but four cases of vicious union or ankylosis following fracture and all were of the elbow joint. In the same group there were five cases of spinal curvature of disqualifying degree.

The foregoing were the prominent impressions received. Standing foremost, however, were the defective teeth and the neglect of proper dental work and oral hygiene. There is a woeful need of education. Physicians must become aggressively active and direct greater inquiry, when consulted by patients, as to the condition of the teeth. When found defective the individual should be impressed with the need of securing proper dental attention.

It is our hope that this brief summarization will stimulate a study of these examination blanks in the several Michigan districts with the compilation of the deductions in the form of a paper that we will welcome for publication.

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#### STANDARDS OF DIAGNOSIS OF PULMONARY TUBERCULOSIS IN CHILDREN.

The following set of standards of diagnosis of pulmonary tuberculosis in children were originally prepared for the New York City

Association of Tuberculosis Clinics. After a preliminary trial in these clinics, the standards were submitted to the board of directors of the National Association for the Study and Prevention of Tuberculosis on October 16, 1915, with the suggestion that they be adopted as a uniform method of diagnosis throughout the United States.

The board of directors of the National Association appointed the undersigned committee to consider the standards and to report back as to the advisability of their adoption. When the committee reported at the meeting of the board on March 11, 1916, it was decided to have the report printed and made available for discussion by the membership of the National Association. The full report, with the standards, was published in the Bulletin of the National Association for April, 1916. At the annual meeting of the National Association in May, 1916, a special session was devoted to the discussion of the standards, a report of which will be found on pages 37 to 51 of the *Transactions of the Twelfth Annual Meeting*.

Following the outlines of this discussion, the committee revised the standards and presented them at a meeting of the board of directors of the National Association on October 14, 1916. The board of directors at this time gave the committee instructions to make further revisions as might be necessary and to prepare the standards for publication with the authorization of the National Association.

The standards which are submitted herewith are the result of this long discussion. It is hoped by the committee that they will meet the needs of those who are called upon to diagnose tuberculosis in children, and it is urgently recommended that all tuberculosis clinics, sanatoria, open air schools, antituberculosis associations, boards of health and other agencies that deal in any way with the tuberculosis problem in children adopt these standards, and in future classify their needs in accordance therewith.

#### STANDARDS FOR THE DIAGNOSIS OF PULMONARY TUBERCULOSIS IN CHILDREN.

In a certain number of cases the conditions establishing a diagnosis of pulmonary tuber-



culosis in children are identical with those which obtain in adults. In such cases, the Standards of Diagnosis and Classification are the same as those set forth by the National Association for the Study and Prevention of Tuberculosis.

In a very large number of cases, however, the conditions in children differ materially from those in adults and for these the following procedures and standards are recommended:

#### HISTORY.

The following points should be covered in obtaining the history. Some of them, as indicated by italics, are more important than others. Emphasis should be laid upon the combination of several of these conditions, it being understood that all of them are not essential and that no one of them alone establishes a diagnosis.

*Intimate exposure to infection, especially if prolonged.*

Delayed convalescence from illness.

*Malnutrition: indicated by underweight for height and age, loss of or failure to gain in weight, and pallor.*

*Cough.*

Expectoration.

*Hemorrhage.*

Pleurisy.

Dyspnoea.

Night sweats.

Digestive disturbances.

Ear discharge.

#### CONSTITUTIONAL SYMPTOMS.

In every physical examination, the possible occurrence of all of the following constitutional symptoms should be considered by the examiner. In consideration of their importance, the same rule should be followed as noted under "History."

*Changes in disposition, shown by lassitude and fretfulness.*

*Malnutrition.*

*Elevation of temperature, acceleration of the pulse, acceleration of the respiration.*

*Cough.*

Expectoration.

*Hemorrhage.*

Pain.

Dyspnoea.

Night sweats.

Digestive disturbances.

#### PHYSICAL SIGNS.

The following physical signs should be investigated by the usual method of physical examination.

Persistent and persistently localized râles, by which is meant:

(a) Râles about the nipples; that is, anywhere between the fourth and sixth ribs, the border of the sternum and the anterior axillary line.

(b) Râles anywhere along the border of the sternum, or in the region of the apices, as in adults. These, however, are infrequently found. These râles may be heard during inspiration or expiration, or after a cough. In many instances they can be elicited only by the cough.

(c) Râles limited to a considerable part or the whole of any one lobe. If these are associated with a positive tuberculin test and persist over a considerable period of time, they should be regarded as tuberculous, despite the fact that in association with enlarged tonsils or adenoids similar signs may occur. However, in the absence of any means of definitely interpreting these signs and particularly with a history presenting evidence of exposure to tuberculosis, it is wise to give children the benefit of the doubt and to keep them under observation until a definite diagnosis can be made.

Additional abnormal signs elicited by the usual method of examination; such as changes in resonance and breath sounds.

Any glandular, joint, bone, muscular, cutaneous, ocular or aural abnormalities, which are of value as corroborative evidence of the pulmonary findings.

#### ESSENTIALS FOR THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.

1. Distinct, persistent, and persistently localized adventitious signs (râles) in the chest.
2. Reaction to a tuberculin test. This reaction consists of an area of hyperemia not less

than 5 mm. in diameter occurring in forty-eight hours after the application of 100 per cent. Koch's Old Tuberculin by the cutaneous method of von Pirquet.

#### EXCEPTIONS.

1. Given an unquestioned and otherwise unexplained hemoptysis with a positive tuberculin reaction and with or without a definitely positive radiograph, a diagnosis of pulmonary tuberculosis is to be made.

2. Given a radiograph which shows unmistakable mottling well into the pulmonic fields without any sharp outline suggestive of calcification with a positive tuberculin reaction in children under three or four years of age, even if constitutional symptoms are absent, and in older children who have frequent cough or rapid pulse or fever, a diagnosis of pulmonary tuberculosis is to be made.

#### NOTES.

1. Cough will be present in most instances, but its absence does not negative a diagnosis of tuberculosis when the essentials above mentioned are present.

2. Fever, to some degree, will also be present in most instances during some period of the disease. Temperatures in young children should be taken by rectum and observations should be made twice a day, at frequent intervals and for at least a month, before the absence of fever is determined. All other causes of fever must be carefully excluded. Mouth temperature records in children under eight years of age are very unreliable.

3. No patient with fever and persistent physical signs should be considered free from tuberculosis until the tuberculin test has given a negative reaction three successive times within a month. In the interval patients are to be considered as suspects under observation. In rare instances, congenital syphilis simulates tuberculosis and a Wassermann test should be made in all cases with a suspicious history.

4. Examiners are reminded that undue importance should not be ascribed to the slight vocal intensification and respiratory modifications, or to slight alterations in the percussion

note, so frequently present in children, especially at the apices, unless they are persistent.

#### SUSPECTS.

In a certain group of children, an immediate definite diagnosis is impossible and such children should be kept under continued observation. Physical signs may be absent or indefinite, but there must be one or more constitutional symptoms or items of the history indicated above as significant. Exposure to infections is here especially important.

#### The Committee:

JAMES ALEXANDER MILLER, *Chairman*, N. Y.,  
 BERTRAM S. WATERS, *Secretary*, New York.,  
 JOHN H. LOWMAN, Cleveland,  
 HENRY I. BOWDITCH, Boston,  
 JOHN HOWLAND, Baltimore,  
 I. ABT, Chicago,  
 O. W. MCMICHAEL, Chicago,  
 G. L. BELLIS, Milwaukee.

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### *Editorial Comments*

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#### AMERICAN WOMEN'S HOSPITALS.

The War Service Committee of the Medical Women's National Association has organized the American Women's Hospitals for work at home and abroad. The Surgeon-General of the Army and the General-Director of the Department of Military Relief of the American Red Cross have approved the provision made for service to the army and to the civil population. The work will be officially part of the medical and surgical service of the American Red Cross.

The scope of the plan is a broad one. It includes units for maternity service and village practice in the devastated parts of the Allies countries and hospitals run by women for service there as well as for the United States army in Europe. In this country acute and convalescent cases will be treated in hospitals equipped for the purpose; soldiers dependents will be cared for, interned alien enemies will be given medical aid and substitutes will be provided to look after the hospital service and the private



practice of physicians who have gone to the front.

The first units hope to go to France and to Serbia in the early fall.

Headquarters have been established at 637 Madison Ave., New York City. Dr. Rosalie Slaughter Morton is Chairman of the War Service Committee.

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Much has been said and written unofficially about the possibility of conscripting the medical profession to supply the desired quota of physicians for the immense army that our Government is now raising.

Physicians are as essential to the success of an army as munitions and if our troops are to be the deciding factor in the terrible conflict now ranging in foreign lands, the Surgeon General's office must be supplied with a sufficient number of doctors in the Medical Reserve Corps, to take care of the full complement of troops in the field, on transports, in Evacuation Hospitals and Base Hospitals, in Concentration Camps, etc.

While it is no reflection upon any man's honor to be conscripted, at the same time we feel sure that a sufficient number of doctors will volunteer their services at an early date, which means considerable to the individuals so applying.

It is reasonable to suppose that those who volunteer early and receive the benefit of instruction in a Medical Training Camp, will be the ones who will receive advanced commissions. The lowest commissions offered to a doctor is that of First Lieutenant and it draws the pay of \$2,000 a year; Captains receive \$2,400 and Majors \$3,000.

The principal expense to a medical officer will be his mess charges or food, and this should not be over \$25.00 a month or \$300.00 a year in round figures.

Whatever may be the pay, the fact remains that the Surgeon General must have at least 20,000 physicians in the Medical Reserve Corps to supply the present demand, and we feel that the patriotism of the medical profession will be

the stimulus that will induce a sufficient number of doctors to offer their services voluntarily.

Blanks for commissions in the Medical Reserve Corps are now appearing in medical journals or will be supplied you by the Board in your own State. If you do not know the location of this Board, the Editor of this paper will be glad to inform you or send you a blank upon request.

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The fixed compensation of ten cents per person to the medical examiner of drafted individuals was conceived in the mind of we know not who. It is a misnomer to call it compensation. We are rather disposed to look upon this fee in the light of regulations which provides that a nominal sum must be paid for all services—the same as a friend of ours who receives one dollar a year for the use of a private yacht that was taken by the naval officials. When the work is all completed we believe the effort should be made publicly to recognize the patriotic contribution of time that was thus donated to the government. Through proper congressional enactment these services should be recorded and acknowledged.

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Someone "slipped it over." The press announces that the osteopaths have been granted recognition by the Surgeon General's office and may be enrolled for service in the medical department. It will be interesting to learn the full details.

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Wayne County members at a special meeting held last month voted to assess the annual income of each member, not in service, three to eight per cent. to create a fund for the benefit and protection of those who have enlisted. Several of our local societies have made similar provisions in the interest of their fellow members. It is regrettable that political leaders and officials should thrust this necessity of providing for fellow practitioners upon the profession as a whole. England has made better provisions for the comforts of her medical officers than Uncle Sam.

We have failed to note any reports of epidemic outbreaks of anterior poliomyelitis. Localities afflicted last summer seem to be comparatively free from the disease and its westward progress arrested.

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Our State Board of Registration in Medicine, at a special meeting held in July, adopted the requirement of two years of college work before entering medical schools. This additional credit has been required by the Detroit College of Medicine and Surgery and the University Medical Department since 1916.

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The article in this issue on "Shell Shock" by Dr. Marshall is the result of his observations while in England where he was in charge of a 150 bed service over a period of nine months. Dr. Marshall returned to Boyne Falls the last of July but is contemplating locating in one of our larger cities.

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It is to be regretted that there has been so much hysteria in regard to procuring the medical force of the new National Army. It is still more to be regretted that this hysteria—absolutely undeservedly—has reflected unfavorably on the medical profession. As late as August 1 the Associated Press sent out a statement to the effect that a petition was being circulated which declares that the method of recruiting the Medical Corps of the Army by commissioning reserve officers in that Corps who volunteer has proven a failure and asks that in behalf of the welfare of the nation a draft for physicians be made.

This is merely an echo of what many men with the best motives have advocated. It is based on the assumption that the newspapers have had correct figures regarding the number of men who have accepted commissions in the Medical Reserve Corps, and that the medical profession was not responding to the call. Even within the last two weeks, statements have appeared in the newspapers, apparently from authoritative sources, to the effect that less than 3,000 physicians have accepted commissions in the Medical Reserve Corps.

What are the facts? On August 4 approximately 16,000 physicians had offered their services and had made application for commission in the Medical Reserve Corps. Of this number, nearly 14,000 had been recommended for commission. Some of the remaining 2,000 applications were pending; others had been rejected for cause. Of the 14,000 commissions recommended, nearly 9,000 had been accepted. This leaves about 5,000 applications which may be accounted for as follows: 1,300 were pending in the Adjutant-General's Office; an uncertain number had been sent out too recently to allow for the acceptance to be returned; some who had received commissions were delaying—for various causes—in sending in the acceptances. What proportion of this group will finally accept their commissions is problematical; but based on information which we believe to be reliable, we confidently assert that there are at the present time at least 13,000—probably 14,000 is nearer the correct number—physicians ready when called on for active service. These figures do not include physicians who have entered the regular Medical Corps during the last few months, or those connected with the National Guard, the latter at least 1,000 in number. Moreover, from 100 to 150 new applications are reaching the Surgeon General's Office daily. To advocate a special draft of physicians under these circumstances is an insinuation against the medical profession which should be insistently resented.

We repeat: The physicians of this country have been and are offering their services, at tremendous sacrifices in many instances, and are doing their full duty without compulsion and without a special draft. We are confident that not only the present, but every future need which the country may have for medical men, will be supplied by our profession, without coercion or threats.—*Journal A. M. A.*

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We are endeavoring to secure an authentic list of all of our members who are in active service. As soon as it is completed we will cause this list to appear in each issue of the *Journal*, revising it from time to time as changes in



rank and location are imparted. It will be our Roll of Honor. Michigan, according to recent information, stands sixth in the list of states in the number of medical officers volunteering for service.

The summer, varied in its continued revelation of new and formidable problems presenting for solution and final decision, is past and there is presented to us with increased forcefulness, the necessity of urging a greater manifestation of organized co-operative effect. Each component society is urged to early assemble in formal meeting and definitely outline plans for organized activity in order that we may accomplish that which we have pledged ourselves to do for our enlisted fellow members.

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### Correspondence

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Weston, Mich., Aug. 9, 1917.

Editor:

I have just finished reading the article in August *Journal* regarding performance of ordinary surgical operations in the ordinary farm home by Dr. James A. Reader. I believe he has hit the nail squarely on the head. Evidently the doctor has come into contact with some of the grave errors in diagnosis which have come under our observation, made by men who are unfamiliar with the course of a chronic surgical disease. We have found from observation that cases of chronic appendicitis and gall stones were not treated as "stomach trouble" by men who were in the habit of doing the operating on their own cases instead of sending them to the nearest general surgeon. These errors are usually made by men who do not see the inside of an abdomen twice a year.

It would be a grave mistake to advise that every country physician should at once commence doing major surgery. Surgeons to a certain extent "are born and not made." It requires the surgeon's mental poise and personality, ability for quick decision, habit of accuracy, etc., to render one fit to handle the scalpel. But poorly equipped indeed is the collection of country towns which does not include among its medical men at least one who has the natural requirements to handle surgical work. The great hindrance to the development of these men has been that it is so easy to slide out of a case requiring operation and send the case, often to his detriment, to a hospital many miles away. The

laity have not expected us to do surgery, so we have not been driven to acquire the technic and judgment required to do operating.

The point of argument may favor the equipment and management of a large hospital, but results count. Experience has demonstrated amply in our vicinity that with study of the problem a country physician can acquire an armamentarium which will enable him to do as good work in ordinary major operations as is done in any city hospital. The ordinary farm home is free from infected cases, so to that extent it is more likely to be suitable for operating than a hospital operating room, if it could be made as clean.

By the work of one conscientious country doctor in our vicinity, we have seen the laity educated to the point where many of them recognize that indigestion is a symptom and not a disease, and that recurrent appendicitis requires an operation, even though the patient may never have suffered an attack which put him in bed.

When country physicians learn to see for themselves the results of operating on cases of reflex stomach trouble, etc., when once the source of disturbance is recognized, we will see a great falling off in the sale of some drugs and a great increase in the pains they exercise in making diagnoses.

If we could move all our families to large cities where surgical specialists and hospitals are at our very door, it would be well to have all operating done by specialists in hospitals. But so long as our rural population is removed from these specialists anywhere from ten to twenty-four hours, they will on the average be better and more scientifically treated in a neighborhood supporting a country "farm house" surgeon than in one where all the operating goes to some city specialist. Then when a real surgical case requires quick action and cool nerves, like the gunshot case described by Dr. C. A. Van Deusen in the same issue of the *Journal*, a local operator will be obtainable who can render the service demanded and not feel that he is not qualified to do the work correctly.

Yours fraternally,

C. H. WESTGATE.

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### Deaths

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**Dr. Odillon Weed**, of Detroit, died July 17, at his home, 158 Kirby Ave. Dr. Weed was captain of the thirty-second regiment, Michigan Infantry, in the Spanish-American War, and also saw service in the Philippines.

**Dr. G. A. Kirker**, of Detroit, died July 14. He was a well known physician, having practiced in Detroit for about forty years.

We have received notice of the death of the following Michigan doctors, not members of the State Society: Dr. A. E. Bliss, Owosso; Dr. W. A. Maxfield, Hudsonville; Dr. A. B. Carson, Tawas.

Among the doctors in Michigan who are not members of the State Society we have received notice of the following deaths: Dr. Alfred Nash of Lapeer, Dr. A. T. Stevenson, Bay City.

### *State News Notes*

#### NEWS ITEMS FROM WAYNE COUNTY.

Drs. Hugo Freund and Francis Duffield have been appointed to the Board of Health of the City of Detroit, the former has been elected president, the latter vice president of the Board.

Base Hospital No. 17, known locally as the "Harper Hospital Unit," sailed from an American port on Friday the 13th. Everybody is reported to have been in good health and good spirits. Even Captain John Dodds, who had state-room No. 13, seemed to consider the handicap of no moment. Unofficial news reports the unit to have reached a foreign port in safety.

Lt. W. H. Price, late Health Officer of Detroit, is in the Public Health and Marine Hospital service, engaged in a survey of the garbage and sewage disposal, and the water supply of the Mississippi Valley cities east of the Mississippi and south of the Ohio river.

Capt. W. H. Browne is in service with the 16th Regiment Engineers recently in training at the State Fair Grounds, Detroit, but now supposed to be on their way to France.

W. G. Coulter who entered the Royal British Medical Corps in December, 1915, was in the Battle of the Somme with a Berkshire regiment. He is now at the \* \* \* Eye, Ear, Nose and Throat Hospital in England.

John H. McRae entered the Canadian Medical Corps in December, 1916, and is now at the Canadian Eye, Ear, Nose and Throat Hospital at Folkestone, England.

Captain Fred H. Newberry has been assigned to duty at Fort Benjamin Harrison, recruiting ambulance companies.

Lt. E. G. Brandenberger, a 1916 interne of Grace Hospital, has been assigned to duty with the Medical Corps at the New York State Re-

cruiting Camp at Syracuse, and is in service at the camp contagious hospital.

Captain Fred C. Kidner, who went to England with a group of twenty American "Orthopods" under the direction of Dr. Goldthwaite, of Boston, is now at work in a large orthopedic hospital at Shepherd's Bush, London.

Stainer Ellis, recently House Surgeon of Grace Hospital, went with the first Canadian contingent to France as a lieutenant in the Medical Corps. He was promoted to a captaincy in 1916 and made a major in 1917. He is now chief surgeon of a large British Field Hospital in France.

Lt. H. K. Shawan, who sailed with the Cleveland Lakeside Base Hospital, is now in a British Base Hospital in one of the coast cities of France.

Lt. A. F. Jennings has been ordered to the aviation school at Mt. Clemens for duty as post surgeon.

Captain W. H. Honor, of Wyandotte, volunteered for service in the Medical Corps of the British Army as one of a group of twenty-five officers who left Fort Benjamin Harrison in June for immediate service abroad.

It is reported that the Detroit College of Medicine and Surgery base hospital unit No. 36, has been selected to be the first 1,000-bed unit in the United States. In addition it will have a special department for treatment of eye, ear, nose and throat diseases, as well as general diseases and head injuries.

Thirty surgical and medical officers and two dentists will be added to the staff. As soon as the new organization is completed, the unit will be mobilized for drills before sailing orders are received.

Lt. Geo. E. Frothingham, who has been placed in charge of the local examination of applicants for the aviation corps, has appointed his assistants, and has made complete arrangements for the prosecution of the work. The regular examination of recruits is expected to begin in a very short time.

Capt. Arthur D. Holmes is the medical member of the local Exemption Board, and is anticipating momentarily to be overwhelmed with the examination of claimants for exemption, a work which promises to be of peculiar difficulty. Up to the present time nobody has appeared who envies the captain his job.

#### Concerning Doctors Who are Drafted.

There appears to be a general uncertainty as to what will be the fate of physicians whose names have been drawn in the selective draft. The opinion has been advanced by some that when any man's name has once appeared among those drawn, he no longer has the privilege of



volunteering for service. On the other hand, Capt. C. D. Brooks, who is president of the local federal examining board, is permitting those who have been drawn, to apply for commissions, in the belief that they will be permitted to volunteer. He is quoted in the Free Press as saying:

"I believe that fully 150 doctors have been drawn into the new army. If they come in and fill out the application blanks, even now, I believe they will be given commissions in the medical officers' reserve corps. I believe it is the intention of the war department to permit every man to serve where he can be used to the best advantage, but unless these doctors make applications for their commissions, they cannot claim exemptions because they are medical men.

"Several physicians who were born in Canada and other foreign countries, and who have taken out their first papers to become citizens of the United States, have been turned down by the war department for commissions, when they have applied.

"I have asked for a ruling on this question, as it does not seem right to draft these men into the new army as soldiers, when they have already applied for commissions.

#### Give Furloughs to Medical Students.

"The United States does not intend to follow a big mistake made by England and France, that has resulted in both of these countries being practically without doctors now, when they need them so badly. The advisory council of the Council of National Defense is planning to have all medical students already enrolled in medical colleges given a furlough in September so they can attend the medical schools. In this way we will have our usual number of new doctors every year, and they will take the places on the battle fields of the older surgeons, or those who have become incapacitated."

The following doctors have been examined and recommended to the war department for commissions in the Michigan division, medical officers reserve corps: Drs. Frank R. Starkey, Robert Beattie, Edwin Ridley, August E. Gehrke, Theodore H. Smith, William W. Plummer, Morrell M. Jones, Gordon S. McAlpine, Samuel F. Havestock, Frank Ostrander, all of Detroit; Robert J. Beeby, West Branch; E. H. Bailey, Flint; Henry J. Meyer, Saginaw; Carl D. Chappell, Flint; Charles D. Martin, Mt. Clemens; Thomas A. Manes, Deckerville; Robert C. Lyle, Bridgeport, and Russell R. Huston, Copemish.

The R. C. Ambulance Co. No. 8 is in readiness and awaiting orders. The medical officers are: Captain Charles Barton, Lieutenants C. L. Candler, C. Burton Ray and Thos. B. Marsden.

Captain James W. Inches has been requested to make a series of visits to various cities in Michigan to secure enlistments in the Medical Officers' Reserve Corps. It is apparently the opinion of the authorities in Washington that we are still greatly in need of men for this service. It is probably true that even yet, a large part of the medical profession are thinking of the war in terms of their own personal preferences. We all know doctors who would be willing to accept a commission if they could be assigned to do some particular work in which they have an interest, but who are holding back until the government will hand them the job they are looking for. Such men have not yet begun to realize what war means, and that it is everybody's business.

The Thirty-first Infantry is on the point of department for the South. Farrand, Williams and Clark have donated to the regiment a complete outfit of medical supplies. The medical officers have begun vaccinating the men.

The most memorable meeting of the physicians of the city of Owosso was held in the Armory Friday evening, August 3rd. The meeting was in honor of the physicians of Shiawassee county who have offered their services in behalf of the nation and are called to the service.

The parlors of the officers' quarters were beautifully decorated. The walls were draped with Old Glory. Amidst the drapings there hung a life-size portrait of the late Dr. Jabez Perking, together with his command issued in 1861, signed by Abraham Lincoln. The tables were decorated with cut flowers.

The first hour was given over to a general visit and talk-fest and good fellowship reigned supreme. Light refreshments were then served, after which toasts were drunk to the health of the principals present, as well as those absent. Responses, speeches, the paying of tribute, and story telling consumed several hours. Altogether it was a very touching and heartfelt occasion and with a sense that the medical profession of Shiawassee county is doing her duty.

Dr. J. J. Haviland has received his captain's commission, and left to-day for Fort Benjamin Harrison.

Dr. George P. Sackrider has received Commission of First Lieutenant and is assigned to the Detroit College of Medicine and Surgery Base Hospital and expects to be in France within the month.

Dr. G. T. Soule, of Henderson, has received the commission of First Lieutenant and awaits orders.

Dr. Harold A. Hume, Captain, is a medical officer with the State Administration Board, and reported in Lansing for duty this morning.

Dr. J. O. Parker has been examined and recommended, and awaits his commission, ready for service.

Dr. Harry L. Arnold has received his commission of Captain and has been for some time in the service, being stationed at Columbus Barracks, Ohio.

Dr. A. L. Arnold, Jr., is also in the service and is stationed in the Marine Hospital at Brooklyn, N. Y.

With many cheers and expressions of good will, there closed a meeting of the physicians of the city of Owosso that will by them never be forgotten.

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The Physicians' and Surgeons' exchange, with offices in the Kresge building, has started a campaign in Detroit to render real, efficient service to the general public through its establishment of a telephone service for those who need the services of a physician or professional nurse.

Hundreds of times during the day in Detroit telephone calls are made for physicians and surgeons which are never completed, due to either the line being out of order, line busy, or because the physician himself is out on other calls. There is no question but that such causes as these have contributed to much needless suffering and even death, and it is through just such service as the Physicians' and Surgeons' Exchange will render the Detroit public that trouble like this can be prevented.

The idea behind this organization is service both to the physician and the general public. All physicians subscribing to the service keep constantly in touch with the exchange, and whenever they leave their offices immediately report their destinations to the operator at the exchange office. Should any calls come for a physician during his absence from the office, the exchange can immediately put the party desiring his services in touch with him, wherever he may be located.

Another important feature of this service is this—should the physician called be out of the city, the exchange operators will call the physician nearest the home of the party desiring his services.

The Physicians' and Surgeons' Exchange has operated offices for seven years in Los Angeles, seven years in San Francisco, and two years in Cleveland. The Detroit exchange, however, is an independent organization, in charge of which

will be Mrs. I. H. Perkins, who has established it here and secured its incorporation.

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The National Board of Medical Examiners held its second examination in Washington, D. C., June 13 to 21. There were twenty-four qualified candidates, twelve of whom appeared for examination, the others having been ordered into active duty between the time of their application and the date of the examination. Of the twelve who took the examination nine passed.

The next examination will be held in Chicago, October 10 to 18. The regular Corps of the Army and Navy may be entered by successful candidates, without further professional examination, providing they meet the adaptability and physical requirements.

There will be an examination in New York City in the early part of December.

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WANTED—A young Doctor to teach Anatomy, full time man at a modest salary, for one year. A good chance for a young Doctor to get a start in Detroit. Address Dr. W. H. MacCraken, 250 St. Antoine St., Detroit, Michigan.

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Dr. James W. Inches, city health officer of Detroit, and captain in the medical officers' reserve corps, has been assigned by the war department to tour the state in an effort to stimulate applications for army commissions among Michigan doctors.

Dr. Inches will start as soon as he can arrange a convenient itinerary. His trip will include visits to the principal cities, addresses before the various county medical societies and examination of applicants. Applicants accepted and commissioned will be placed in the reserve corps and called as needed.

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Dr. Harry W. Long of Escanaba was elected President of the U. P. Medical Society at its annual meeting on Aug. 3d. Dr. H. T. Sethney of Menominee, Dr. R. Burke of Diorite as First and Second Vice-Presidents completes the list of officers. The meeting next year will be held at Menominee.

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Dr. W. DeKleine of Flint, Dr. E. R. Vanderlice of Mason, Dr. A. B. Shephard of Kalamazoo and Dr. E. B. Pierce of Howell are being mentioned as being considered for assignment to duty in the several concentration camps to study the question of tuberculosis among enlisted men.

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Dr. W. J. DuBois of Grand Rapids, who was ordered to Ft. Benjamin Harrison has returned



home and has been placed on the inactive list on account of physical disability.

Dr. J. C. Kenning of Grand Rapids has been placed in charge of the X-ray Department in the main hospital of the Great Lakes training station.

Dr. J. T. Case of Battle Creek has been transferred from the Ambulance Company and is now on the staff of the Chief Surgeon of the American Expeditionary Force to France.

Dr. A. M. Hume of Owosso attended a Conference of Railway Chief Surgeons and the National Defense Committee held in Washington the last of July.

It is reported that Dr. E. B. Deuch of New York City has enlisted in the D. C. of M. Base Hospital and will be in charge of all head surgery.

Dr. R. C. Jamieson has removed to the David Whitney Bldg., Detroit, and will limit his practice to dermatology and syphilis exclusively.

The first number of Vol. II of the Grace Hospital Bulletin appeared in August. Four excellent articles comprise the contents.

Dr. J. J. Holes and Dr. A. A. Hoyt of Battle Creek were ordered to report to Fort Riley on Aug. 15.

Drs. G. H. Thomas, A. Leenhouts and J. J. DePree of Holland have received commissions as Lieutenants in the M. R. C.

Dr. Alpheus F. Jennings of Detroit has been assigned to active duty in the Aviation Camp at Mt. Clemens.

Dr. Francis Duffield of Detroit has been appointed a member of the local health board.

Dr. E. J. Evans of Greenland was ordered to Ft. Benjamin Harrison on Aug. 8.

Dr. H. D. Brown of Jackson reported for duty at Ft. Riley on Aug. 15th.

Dr. J. W. Evers and Dr. C. S. Ballard of Flint were ordered to Ft. Riley Aug. 15.

Dr. W. B. Lunn of Marquette is now at Ft. Riley.

Dr. F. W. Lockwood of South Lyon is in training at Ft. Benjamin Harrison.

Dr. H. J. Pyle of Grand Rapids and Miss Anna C. Warnshuis of Holland were married August 16.

Dr. O. B. Lambert has located in Calumet.

## County Society News

### ALPENA COUNTY

The regular meeting of the Alpena County Medical Society was held at the North Branch House, Thursday, July 19. Dr. Leo Secrist and A. W. Schmalzer were hosts at dinner. Hon. Joseph Cobb, a leading attorney of Alpena, was present as a guest and gave an interesting and instructive paper on Diagnosis and Treatment, in which he told what was expected of the doctor from a legal point of view.

Dr. Geo. Hillman presented an interesting paper on Enterocolitis.

The following members of the Society have accepted Commissions in the Officers Reserve Corps, and expect to leave soon for the army: George Lister, A. W. Schaler, Fred Nevins, Wm. Arscott, First Lieutenants, and C. M. Williams, Capt.

Drs. Dunlop and Bonneville were appointed to entertain at the meeting of Aug. 16, and Drs. Secrist and Cameron to read papers.

Dr. S. T. Bell appointed Secretary to take the place of C. M. Williams, who enlisted.

C. M. WILLIAMS, Secretary.

## Book Reviews

MUSKETS AND MEDICINE, OR, ARMY LIFE IN THE SIXTIES. Charles B. Johnson, M.D. Cloth. Price \$1.50. F. A. Davis Co., Publishers, Philadelphia.

This is a rather interesting narrative by an author who enlisted while a farmer lad, served with his regiment, entered the hospital department, honorably discharged, later attended the University of Michigan and is now a practicing physician in Champaign, Illinois.

The chapters recount many interesting war experiences and happenings, contact with privates and officers alike, hardships encountered, campaigns participated in.

On the whole it deals more with "muskets" than "medicine" of that war and the medical features are more generalities than details. An

appendix contains some well known summaries of fatalities and recoveries.

On the whole it is a light narrative that will be enjoyed by readers who are inclined to peruse books of semi-autobiographical nature.

A TEXT-BOOK OF FIRST AID AND EMERGENCY TREATMENT. A. C. Burnham, M.D., Instructor in Surgery, New York Polyclinic. 160 illustrations. Cloth, 307 pp. Price \$2.00. Lea & Febiger, Philadelphia.

This will be found a useful manual and guide in giving instruction in First Aid. It presents the essentials that a beginner should know. Corporation surgeons will derive much benefit in supplying this manual to first aid workers. It is confidently recommended to all seeking reliable and effective information on the subject.

DISEASES OF CHILDREN. A manual for students and practitioners. By George M. Tuttle, M.D., Clinical Professor Pediatrics, Washington University and Phelps G. Hurford, M.D., Pediatrician, St. Louis University Hospital. Third revised edition. Illustrated, cloth, 599 pp. Price \$3.50. Lea & Febiger, Philadelphia.

With pleasing accuracy this book imparts the essential phases of the subject. Revised so as to reflect the current advances it will be found to be a reliable and useful number in every medical library. It must be acknowledged that nowhere will one find such a compact, practical work upon the subject. It is creditable to authors and publishers alike.

1916 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minn. Octavo of 1014 pages, 411 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.50 net; Half Morocco \$8.50 net.

Maintaining the excellence of former editions this collection commands respect and admiration. The subjects covered impart the latest information and the results secured reflect the broad experiences of the authors. The bibliography is additionally valuable. These series have made an enviable place for themselves. They should be in the library of every physician and surgeon. If one were to purchase but one volume this year we would urge that this collection be that volume.

DISEASES OF THE STOMACH, INTESTINES AND PANCREAS. By Robert Coleman Kemp, M.D., Professor of Gastro-intestinal Diseases at the Fordham University Medical School. Third edition, revised and enlarged. Octavo of 1096 pages, with 438 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

The thorough completeness of the discussion of the subject stamps this volume as the most comprehensive treatise. Every phase is discussed from

an etiological, pathological, clinical, laboratory and therapeutic viewpoint and surgical treatment outlined when indicated. It leaves nothing to conjecture over. Surely no active physician or surgeon can permit this volume to escape his study and frequent reference.

THE ELEMENTS OF THE SCIENCE OF NUTRITION. By Graham Lusk, Ph.D., Sc.D., F.R.S., (Edin.), Professor of Physiology at Cornell Medical School, New York. Third Edition, Reset. Octavo of 641 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$4.50 net.

A scientific exposition of nutrition in health and disease expresses the summarization of this work. As such it is the last word on the subject.

THE TREATMENT OF EMERGENCIES. By Hubley R. Owens, M.D., Surgeon to the Phila. General Hospital; Asst. Surgeon to the Phila. Orthopedic Hospital and Infirmary for Nervous Diseases. Chief Surgeon to the Phila. Police and Fire Bureau; Asst. Surgeon Medical Reserve Corps, U. S. Navy. 12mo. volume of 350 pages with 249 illustrations. Philadelphia and London. W. B. Saunders Company, 1917. Cloth \$2.00 net.

The subject matter of this book is the author's lectures to the Philadelphia policemen and firemen. It contains all that a first aid worker should know and is compiled in such a practical way that the diligent student will become a qualified assistant in first aid work. There is nothing to criticize, much to commend.

EXPERIMENTAL PHARMACOLOGY. By Dennis E. Jackson, Ph.D., M.D., Associate Professor of Pharmacology, Washington University Medical School. 390 illustrations, cloth, 536 pp. C. V. Mosby Co., St. Louis.

PRACTICAL TREATMENT, Volume IV. By 76 eminent specialists. Edited by John H. Musser, Jr., M.D., Associate in Medicine, University of Pennsylvania; and Thomas C. Kelly, M.D., Instructor in University of Pennsylvania. Desk Index to the complete set of four volumes sent with this volume. Octavo 1000 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

EYE, EAR, NOSE AND THROAT. A manual for students and practitioners. By Howard Charles Ballenger, M.D., Professor of Oto-Laryngology, Chicago Eye, Ear, Nose and Throat College, and A. G. Wipperfurth, M.D., Oculist and Aurist, St. Elizabeth Hospital. New Second Edition, Revised, 180 illustrations, cloth, 523 pp. Price \$3.50. Lea & Febiger, Philadelphia.

PRACTICAL MEDICAL SERIES—Year Book, Volume II, 1917, General Surgery, Edited by A. J. Ochsner, M.D. Price \$2.00. The Year Book Publishers, 327 La Salle St., Chicago.

PRACTICAL MEDICAL SERIES—Year Book, Vol. III, 1917—Eye, Ear, Nose and Throat. Price \$1.50. The Year Book Publishers, 327 La Salle St., Chicago.



INTERNATIONAL CLINICS—47th Series, Volume II. J. B. Lippincott Co., Philadelphia. A Quarterly Clinical Review.

THE MASTERY OF NERVOUSNESS. By Robert S. Carroll, M.D., Medical Director Highland Hospital, Asheville, N. C. The MacMillan Company, New York.

HANDBOOK OF GYNECOLOGY. By Henry F. Lewis, A.B., M.D., Professor Gynecology, Loyola University, and Alfred De Poulet, B.Sc., M.S., M.D., Professor Gynecology, Loyola University. 167 illustrations, 451 pp. C. V. Mosby Co., St. Louis.

## Miscellany

The war has given a tremendous importance to the whole subject of diet. Food ranks almost with bullets as a vital factor in the great struggle, and efficient utilization of the crops is just as necessary as big harvests. The Carnegie Institute of Boston is to conduct a series of experiments this fall to demonstrate whether men and women cannot maintain their powers on a smaller ration than has hitherto been accepted as the minimum. The Battle Creek Sanitarium has just finished a metabolism experiment lasting forty-five days, with ten subjects. The object was to determine the effect of different diets on the chemical composition of the blood. The results have not yet been tabulated.

### PROPAGANDA FOR REFORM.

*Creosote-Delson and Creofos*.—Creosote-Delson is said to be "beechwood creosote from which the irritating and caustic properties are removed by fractional distillation." It is marketed chiefly as Creofos. Creofos is said to be Creosote-Delson in an emulsion containing hypophosphites. The Council on Pharmacy and Chemistry declared Creosote-Delson inadmissible to New and Nonofficial Remedies because its identity and its difference from, and asserted superiority over the official creosote had not been established. It declared Creofos ineligible because its composition had not been satisfactorily declared, because the therapeutic claims were grossly exaggerated, because the name was non-descriptive of the composition and because the inclusion of hypophosphites was irrational. (*Jour. A.M.A.*, July 7, 1917, p. 58.)

*Some Misbranded Nostrums*.—The following "patent" medicines have been found misbranded

under the federal Food and Drugs Act, chiefly because the therapeutic claims made for them were misleading and false: Quaker Herb Extract, a water-alcohol extract of an emodin-bearing drug. Payne's New Discovery, a water-alcohol solution containing small amounts of baking soda, licorice and extractive matter from a laxative plant drug. Payne's Quick Relief, chiefly turpentine with cayenne pepper, resin, camphor and chloroform. Quaker Oil of Balm, containing turpentine, cayenne pepper, chloroform, etc. Cooper's New Discovery, a nostrum of the alcohol tonic type, containing 20 per cent. alcohol, some emodin, aloes and a small quantity of oil of sassafras together with reducing sugars. Cooper's Quick Relief, a liniment consisting of cayenne pepper in alcohol (31 per cent.) flavored with oil of sassafras. Wilson's Preparation, a powder containing largely starch, acacia and sugar with potassium acetate, calcium hypophosphite and quinin. (*Jour. A.M.A.*, July 7, 1917, p. 58-59).

*Venarsen*.—William A. Wilson, Kansas City, Mo., writes that he has advised the Intravenous Products Company that after using a great quantity of Venarsen, he can see no more effect on the cases treated than if so much water had been administered, and that this is also the report of Don R. Black, pathologist for Bell Memorial Hospital, University of Kansas (*Jour. A.M.A.*, July 7, 1917, p. 62).

*Triner's American Elixir of Bitter Wine*.—The Council on Pharmacy and Chemistry reports that this is a wine to which bitter drugs and laxatives have been added. Though evidently intended for public consumption, it is also advertised to physicians. The composition of this "wine"—some bitter drugs, a laxative and a tannin-containing, constipating red wine—and the advertising propaganda all tend to the continued use of this alcoholic stimulant and thus to the unconscious formation of a desire for alcoholic stimulation. As the medical journal advertisements may lead physicians to prescribe this secret and irrational preparation and thus unconsciously lead to alcoholism, the Council authorized publication of its report. (*Jour. A.M.A.*, July 14, 1917, p. 139).

*Some Misbranded Nostrums*.—The following "patent" medicines have been found misbranded

under the federal Food and Drugs Act. The curative claims made for them were misleading, unwarranted and false: Poland Wine Bitters, a wine to which emodin-bearing and other drugs had been added. Koenig's Nerve Tonic, claimed to be a natural remedy for epileptic fits, etc. Mrs. Edward's Infant Syrup, a "baby killer" containing morphin and alcohol. Root Juice Compound, which was not a root juice. (*Jour. A.M.A.*, July 14, 1917, p. 139).

*The Crucial Test of Therapeutic Evidence.*—Torald Sollmann points out that if a patient improves after taking a remedy we do not know that he improved on account of the remedy or as a result of the natural course of the disease, clinical trials of a medicament should be carried out in one of two ways. The first is the statistical method in which alternate patients receive or do not receive the treatment. This method is usually of value only when a large number of cases are available, and even then it is limited or doubtful because it cannot take sufficient account of the individuality of cases. The second method consists in the attempt to distinguish unknown preparations by their effects. In this a patient, or a series of patients, is given the preparation which is inactive, or a preparation the effects of which are to be compared with the first. In either case the investigator does not know when he is giving one or the other, and tries to distinguish them by their effects. If one drug is really of value and superior to the other, this "blind" test will surely bring out such efficiency or superiority. (*Jour. A.M.A.*, July 21, 1917, p. 198).

*Tumors in Anilin Workers.*—Long exposure appears to result sometimes in the development of tumors of the bladder, with or without the symptoms of chronic anilinism. In Germany many such cases have been observed in past years. At the first sign of trouble with urine or bladder in anilin workers, the advisability of careful cystoscopy should be considered. (*Jour. A.M.A.*, July 21, 1917, p. 204).

*Low's Worm Syrup.*—The A.M.A. Chemical Laboratory reports that Low's Worm Syrup, sold by Smith, Kline and French Company, Philadelphia, contains 0.93 Gm. santolin per 100 cc., or 4.2 grains per fluidounce, and a laxative drug, probably senna.

Each drachm (teaspoonful) therefore contains a little more than one-half grain. The preparation, like so many of the worm syrups on the market, is of the usual dangerous santolin-containing type, although no hint is given of the presence of this drug nor any warning that it contains a poison. (*Jour. A. M.A.*, July 21, 1917, p. 225).

*Redintol.*—This is a paraffin mixture for the treatment of burns. It is marketed by Johnson and Johnson, New Brunswick, N. J., with the following statement of composition "Paraffines 95 per cent. combined with Resina Palaquium and Oleum Picis Liquide." This means little and probably was so intended. Oleum picis liquide is oil of tar and resina palaquium is gutta percha. Simple paraffin would no doubt answer as well as this secret mixture. (*Jour. A.M.A.*, July 28, 1917, p. 306).

PATRIOTIC  
COMMITTEES  
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SEND IN THE  
NAMES OF  
THEIR MEMBERS  
AS SOON AS  
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FOR DUTY.



# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XVI

GRAND RAPIDS, MICHIGAN, OCTOBER, 1917

No. 10

### *Original Articles*

#### PRESIDENT'S ADDRESS.\*

R. BENNIE, M.D.

SAULT STE. MARIE, MICH.

Fellow Practitioners of the Upper Peninsula: At the outset, I desire to thank you most sincerely for the honor you have conferred upon me in selecting me to preside over the destinies of this Society, during the last two years. With your co-operation always so freely given and the able assistance of the Delta County Medical Society, under whose auspices we meet, I have every hope and confidence that this meeting may prove pleasant and useful to us all.

Since last we met in annual convention, our peace-loving and forbearing country has been forced to take part in the most terrible war that the world has ever known. A war that not only threatens the obliteration of nations, by means of the sword, but the extinction of whole races of people through pestilence and mal-nutrition with its resulting evils.

At the recent meeting of the American Medical Association the question of "War's Influence on Medicine," was very thoroughly discussed by Dr. Charles Mayo, President of the Association, as was also the "Influence of War on Medical Science," by Dr. James Ewing, Chairman of the Section on Pathology and Physiology, but it would appear that the question more immediately at hand is "The Effects of Medical Science on War." What part is the medical profession to play in this great conflict? It is true that these two propositions are correlated and so intimately associated as to be inseparable, just a little different viewpoint.

At our own State Meeting in May, it was pointed out by Dr. C. B. Burr, that of all the arts and sciences of which, before the war, we boasted as advances in civilization and progress, the only science devoted to conservation, to building up, to repairing that which

is broken, is the science of medicine and the arts and sciences allied thereto, nursing, dentistry, pharmacy. All the others, physics, chemistry, electricity, the industrial arts, are being loosened and all of their forces are being used for purposes of destruction.

In selecting this theme, I feel that I am but following the general trend of thought at the present time, besides, this question is pertinent to the aims and plans of this Society. The relation of the profession we represent to the war in general is not old. It is decidedly new and modern. The physician as a vital and integral part of the great fighting organism played a rather unimportant part in the war of former times. True, he was there, even officially recognized, ever since there were regular armies and so-called modern warfare of that particular time, but his work was considered of little consequence, his estimate by the State and by those in immediate command of the fighting forces, was rather low, and the net results of his operative surgery pitifully small as compared with the highly developed efficiency of the modern Medical Corps.

War as conducted at the present time is a combination of scientific forces employed with scientific thoroughness, making it less a matter of individual bravery than the co-operation of a multitude of factors, not only human but mechanical. The successful working of which depends not only upon the ingenuity of the designing and directing minds, but as much and perhaps more upon the faultless working of a cold, soulless, but nevertheless highly efficient machinery.

The enlarged scope of modern warfare with its numerical extensiveness and horribly efficient intensity makes also a greater demand upon the co-operation of its medical officers. The activities of the Medical Corps are in the main threefold:

1st. The physical preparation of the Country's man-power.

2nd. The hygienic, sanitary and dietetic car

\*Read at the Annual Meeting Upper Peninsula Medical Society at Escanaba, August, 1917.

of the men in training and of the armies in the field.

3rd. The functional repairment of the sick, the wounded and the crippled.

On the basis of the wellknown and generally recognized medical dictum, that "An ounce of prevention is better than a pound of cure," the warring nations, notably those of Europe having standing armies, have gone to great lengths to prepare the personnel of their armies during the time of peace, not only intellectually but physically, to make them seasoned and hardened and capable of great and lasting offensive momentum, as well as capable of enduring the most adverse physical and climatic conditions with the least possible deleterious effect upon their physical organism.

Commencing with the examination of the recruit, which is most rigid and thorough, and his particular physical condition, which may either exclude him altogether or assign him to such branches of the service where a lesser strain makes lesser demands upon his less capable physique.

The absolute application of this principle of relative utility of the individual for a selected service is, I believe, the secret of the astounding endurance under most trying conditions of the man-power of the central European nations, and this application does not begin with the recruit in the barracks; it begins with the pupil at school, it continues through his young manhood, it follows him through life and makes him an efficient fighting force in time of need.

The old Spartan idea of the State as the dominant feature and the individual as subservient to it, has found its realization anew in the European powers, who lay claim to the highest possible efficiency of the individual to the greater efficiency of the State. Which is it? The individual, for the sake of the commonwealth, or the commonwealth for the sake of the individual. That is in the last analysis the difference between the Teutonic and the Anglo-Saxon idea of freedom. Whether we like it or not, we are forced by the sheer necessity of efficiency to follow the example of our foes and even, if only for the time being, render subservient to the higher needs of the State, the inclinations of the individual. Here we must consider every necessary means to render a highly efficient service to our Country by supplying it with human material, fit to do and endure the tremendous demands of modern warfare. Tremendous indeed, not only because of numbers heretofore unknown and believed to be impossible and impracticable, but also be-

cause of the increased destructive power of modern war machines; but many surprising things have happened during this war, which were hitherto thought impossible.

Barely three years ago, we all read and many of us believed, that the destructiveness of modern engines of war would make a long war impossible, and that the use of the small calibre of the modern projectile would render impossible the ugly wounds of former conflicts. The experiences of the present war, however, show that both assumptions were wrong. The last European war of any magnitude, from the standpoint of numbers of men engaged, was the Franco-Prussian War of 1870-71. It lasted less than a year. The present war has entered its fourth year, and what of the much discussed humane or "Civilized Warfare?" While it is unquestionably true that projectiles from the small infantry rifles are comparatively less destructive in lasting results than the coarse large projectile, such as was used in our own Civil War, it is also true that the modern magazine rifle, the machine gun, and similar machines can throw their projectiles in much less time and in greater numbers, and while the Medical Corps finds the flesh wounds caused by the smooth steel jacketed bullets, easy to treat, we are confronted by the newer and more inhuman lacerations of explosive bombs, gases, liquid fire, and the most of all, the dreaded shrapnel. But here let me point out to you with professional pride the almost miraculous results of the treatment of these wounds, heretofore considered almost hopeless. The advances of medical science along the lines of asepsis and antisepsis has been the means of saving limbs and lives that formerly would have been lost, and the astonishing fact that from 75 to 87 per cent of all wounded return to the front. I might also mention the fact that the increased efficiency of the nursing profession has greatly lessened the amount of pain and suffering formerly so unavoidably associated with the battlefield.

But perhaps the greatest service the medical profession has rendered humanity, a service of most constructive, yes, almost creative character, is the functional repairment of the battered and crippled. Here constructive surgery has had its greatest triumphs, and permit me to say, that while modern war is employing science in its highest potency, only for destructive purposes, medical art has brought to still higher perfection the practical application of that same science for constructive purposes.

Artificial limbs we have had long before this war, but they were comparatively crude, and



often of little practical value. Modern surgery, under the pressure of the dire necessity of many thousands who have lost arms, legs or fingers, has developed a new art—the re-vamping, so to speak, of the human body, and is succeeding to such an extent, that her work is not only aiding and comforting the afflicted individual, but materially solving an economic problem for the State.

Where, heretofore, the pension fund, charity organizations and private assistance, rendered a service to the crippled veteran, making him after all dependent or semi-dependent upon others, modern creative surgery has found means and ways to make these unfortunate victims at least partially self-supporting. Perhaps some statistician will figure out the economic value of these services to the State.

Viewing the purely medical aspect of the service, the results at the present time are marvelous. During our Spanish American War, thousands of our soldiers contracted typhoid fever, malaria, dysentery and whole shiploads were landed on their return, suffering from these diseases, and in many instances with almost no medical attention. At the present time we can apply our increased knowledge of prophylaxis, sanitation and hygiene with the result that these diseases are becoming relatively rare, among the fighting forces, truly a glorious achievement for this branch of the service.

Now at the risk of becoming tiresome, I will take a little more of your time to say a word for the Medical Officers Reserve Corps.

Our Country is calling for medical men, the most recent estimate is, I believe, 24,000 or 25,000. The need is great. The call is urgent. There is ample scope for every one in his own particular line, the laboratory man, the clinical diagnostician, the internist, the surgeon, the alienist and neurologist; many cases of mental disease are developing from shell shock.

To the young man, the advantage of joining the Medical Officers Reserve Corps is great. Apart from the purely professional aspect, he will gain self-reliance and resourcefulness, which in later years will prove two of his greatest assets. To those of middle life, there will be opportunities for practical application of the results of their years of experience. The remuneration is not large, but we will have the enduring satisfaction of having rendered our beloved Country a most valuable service in the time of its most pressing need.

## TWO CASES OF CEREBELLAR CYST.

A. S. KITCHEN, M.D., F.A.C.S.

ESCANABA, MICH.

My purpose in taking up this subject is to emphasize the bolder and more evident features of this most interesting and possibly not uncommon condition. This was first suggested to me several years ago when I had my first case; and still more forcibly later at the Boston Meeting of Clinical Congress of Surgeons where I was fortunate enough to see Dr. Harvey Cushing operate and to hear his assistants lecture.

I might say that the most impressive feature of this clinic was the reading of a clinical history record written by a physician in the country which was remarkable for its logic and keen observation of the patient under discussion. I might add also that the diagnosis had been worked out to a remarkable degree of certainty. I asked myself the question, "Is it possible that we have been lurking in the dark all these years while the rest of the country practitioners are progressing into such astute diagnosticians?"

Later I discovered that this one man was somewhat of an exception and that at least a goodly percentage of our men had allowed themselves to be diverted from the head to the belly.

We all had learned in college—in fact had drummed into us—the four cardinal symptoms of cerebral tumor: headache, vomiting, vertigo, and optic neuritis, and yet out in the swirl of general practice we kept our eye on the poor little appendix.

All the cases I have seen were treated for gastric and other abdominal conditions, and yet after a lucid interval of thought the diagnosis stood out as plain as a great ship out of a suddenly lifting fog.

The cases I have to report are somewhat ancient but still under observation. In fact I hope to present them to you to-day.

CASE 1. Man aged 30. While working on a post-saw in July, 1909, the post flew back from the saw and struck him above the left ear. He was knocked unconscious and bled profusely from the mouth, nose and left ear. About five hours afterward he regained consciousness and after three days was sent to his home in Escanaba.

At this time I was called and found as the most prominent symptom a complete paralysis of the left side of face. As far as I can recall there were no symptoms such as vomiting, headache, optic neuritis, or vertigo which were prominent enough to indicate any great amount of intracranial pressure. Of course a certain amount of soreness and dizziness

\*Read at the meeting of the Upper Peninsula Medical Society, Aug. 2 and 3, 1917.

isted at this early date but these were attributed to the concussion, so that his condition was considered generally satisfactory when the severe nature of the injury was taken into consideration.

The facial paralysis was treated by electricity for about eight weeks, after which time he went to work on the docks. This necessitated climbing ladders and he noticed that by either looking upward or downward he would become dizzy, and it was only by looking straight ahead and maintaining a firm grip on the ladder that he could prevent himself from falling.

He was fairly well until the following June at which time his wife noticed that he had a poor appetite, bad breath, and coated tongue. This however, went away after rest and physic.

He was fairly well all winter but in the spring of 1911, to quote his wife: "His knees and arms seemed to be weak. He was very irritable and could not bear any noise nor could he sleep on account of the heat. There seemed to be a pressure in his nose and his nose was always running. In June he was very much inclined to lie down at any opportunity. In the beginning of July he was dizzy but his was not steady. Vomiting started about the third week in July. This vomiting would come on independent of eating and was accompanied by severe wrenching and pain in the head so that I would have to hold his head. This vomiting was such that it was hard to keep him vomiting in the basin. It was difficult to arouse him for supper which would be his breakfast as he worked nights. After eating and on his way to work he would sit down and vomit probably once or twice. After going to work which was on the docks, eighty feet high, strange to say, he would not feel sick."

I have given you the wife's verbatim account of his symptoms for the reason that I regard the close observation of intelligent relatives as of enormous value in the early detection of these cases. In fact I am to-day relying on the careful observation of this woman for the detection of any signs of an early recurrence in his man.

These cases come to the physician generally late and have often been treated by the relatives with headache powders and physic for some time, and I must admit that even physicians, in the hurry and bustle of general practice, are prone to pass lightly over these cases in the early stage and later get into disrepute when the real disease is recognized after the classic symptoms are fully developed.

To continue with the history of this man I might say that on June 8, 1911, I was called while this man was in the condition described by his wife as listless, irritable, very dizzy, vomiting, with slight delusions, and with considerable animosity toward his wife and children.

I at once referred him to Dr. Elliot for examination of eye grounds. Dr. Elliot states that he found a most remarkable edema of the optic

disc. Dr. Elliot also put him through several of the modified Berney tests, most important of which I regard, the pointing tests. These are made by having the patient point at a definite point while his eyes are opened. Then to close his eyes while standing (if possible) to drop his hand to his side and bring the pointing finger back as near as possible to the original point. Using the right hand, a man suffering with a right cerebellar lesion would be unable to bring his finger back to the original point. His finger would probably be brought back from two to six inches to the right of the point. In left cerebellar disease the finger would be brought to the left of the point. However, left cerebellar disease would be tested with the left hand.

Another important test is a rotation of the wrists. Owing to a tonic pressure on the intrinsic nuclei, the wrist on the diseased side would rotate slower than on the normal side.

The tests for nystagmus as I will explain later, should never be considered absolute for cerebellar tumors, but in conjunction with other tests, are very important.

In Case 1 Dr. Elliot found very pronounced nystagmus. When looking to the right there was a rotary nystagmus but none in any other direction. Also when looking to the right he became dizzy. For this reason it was his habit to keep his eyes looking downward. In fact he used to lie on his right side with his face partly buried to the right in order to avoid feeling dizzy and getting nauseated. On standing up with his feet together he would sway to the right and rather forward. This swaying to the right and rather forward is a good localizing symptom indicating a break in the co-ordinating fibres of the right side of the cerebellum. His temperature was either normal or subnormal.

I may state here that if abscess were suspected one would expect irregular temperature. However, one can have an abscess and still have subnormal temperature. This, no doubt, is the result of pressure interfering with the heat regulating center in the fourth ventricle. His pulse was remarkably slow, being around 50. This also indicated intracranial pressure with pressure on the pneumogastric nucleus.

In this case then, we were lead to make a positive diagnosis of right cerebellar trouble in spite of the strong traumatic indications on the left side, X-ray even having shown fracture of the left side.

CASE 2. N, aged 14. Fairly well nourished girl with sallow complexion. Early history is practically negative. The family history is exceptionally good. In October, 1914, child complained of headache in



the occipital region with some dizziness and nausea and sometimes vomiting. These occurred about twice a month but sometimes several months would pass without any symptoms.

In the following spring, 1915, these attacks became more frequent and almost generally occurred in the morning so that it would be necessary for her to return home from school.

About this time I was called and found that she would have a half a degree of fever at times, and again she would have subnormal temperature. I was not able to observe her vomiting for the reason that the attacks would come on very suddenly and last only a short time. Her headaches seemed to be indefinitely located in the back of the head and neck. Her pointing tests were about two inches to the right. Her left pointing tests were also disturbed but so irregularly that I could not be positive as to the location of the disease on the left side. In walking she would toe outward with the right foot, her chin pointing slightly outward and to the left. This convinced me that there was a pressure tone in the right cerebellar nuclei or a pressure on the nucleus of the eleventh nerve which he'd the occiput towards the right shoulder. The position of the right foot with the toe turned outward seemed to me an attempt to maintain equilibrium as the result of a right sided ataxia.

This case I referred to a Chicago surgeon of considerable reputation on brain surgery. I was very much surprised to learn from him later that he had done a left cerebellar decompression, not only on his own initiative, but after consulting with expert oculists and otologists. He explained in his letter that optic neuritis was developing so fast that he had done this in an emergency to save the sight.

She returned home in about four weeks somewhat improved but with a quite distinct cerebellar hernia.

It was only a few days before serious symptoms of pressure again existed, and the hernia was enlarging very rapidly. The localizing symptoms now were very much demoralized. She had fully as bad left symptoms as she did right and I advised her father to take her back to Chicago again as soon as possible. This he was not very much inclined to do and put the proposition up to me to do the work myself.

Feeling sure that the surgeon in Chicago would have explored any cyst on the left side had it presented itself at the time of operation, and realizing that the patient needed a more extensive decompression, I decided to go in on the right side. Of course my first obstacle was severe venous hemorrhage. My second misfortune was to find the skull eroded from pressure of the tumor. This erosion exposed a large diploic vein which I unfortunately, cut. The hemorrhage was very severe. However, this was subsequently controlled and a large area of bone removed. The dura was opened and the cerebellar tissue perforated with artery forceps. There was at once a gushing of a fairly clear fluid of light specific gravity and it was marvelous to see the immediate disappearance of hernia on the left side together with all other evidences of pressure. The venous hemorrhage at once stopped. A drain was inserted and the wound closed.

The patient after a stormy two or three hours, made a prompt recovery and has remained well to

this day, except showing the symptoms which I will afterwards take up.

The Surgical history of Case 1 is summarized as follows: In June, 1911, the original decompression was done on the right side in the occipital region. The venous engorgement here was extreme and the diploic veins bled profusely. The dura was opened and the cerebellum found to be under great tension. The cerebellum was punctured with a grooved director and a straw colored fluid spurted with force for a distance of several inches. There must have been from one to two ounces of this fluid present. The cavity was lightly packed with iodoform gauze and the wound closed. The drain was removed on the fifth day.

The remarkable thing about this case was the wonderful transformation in this man inside of twelve hours. From an absolutely helpless man who appeared like one very thoroughly intoxicated he became a clear rational human being with almost complete co-ordination in twelve hours. The recovery was so fast that he was working inside of two weeks.

About two years later, however, his wife diagnosed a recurrence of the disease. At this time I removed him to the hospital, and locating the site of the original drain, I aspirated about an ounce and a half of the same straw colored fluid through a spinal needle. This relieved him again for about a year.

About a year later than this I again aspirated the cyst.

Last year in June the cyst had filled again and I made an extensive opening of the original wound and enlarged the decompression opening. I found the cyst located in the upper portion of the right hemisphere. It had a glistening membranous lining and I inserted my finger to its full length to determine the possibilities of removal. At the bottom of the cyst which must have approached the fourth ventricle the least pressure of the finger would cause a marked disturbance of respiration. So much so that I retreated hastily, again leaving a drain as before.

This patient has remained in perfect health since that day. I expect the cyst to refill but feel confident that I can relieve any dangerous symptoms within a half an hour's time, the man not losing more than one-half day from work.

In studying these cases one should adopt a systematic procedure. After making note of the four cardinal symptoms of brain tumor the next step is to endeavor to locate the lesion. I think one should start with the olfactory nerve. Then with the optic and each cranial

nerve should be thoroughly studied in the order from their exit from the brain. This should be done in conjunction with an oculist and otologist. The sense of smell should be studied, the presence of catarrh considered, and so on back to the twelfth. Valuable information will be found which will give one a fairly correct idea where to find the lesion.

When we have once suspected the cerebellum, a thorough study of all the classic cerebellar signs and symptoms should be made.

The vestibule and the labyrinth and all eye symptoms of course, belong to the oculist and otologist.

Some of the Barany tests are quite complicated and involve the irrigation of the ear with cold water in order to study any abnormal influence on the very important symptoms of nystagmus and the pointing tests.

Rotation tests are also made which give a clue as to location of these lesions but any general practitioner can easily carry out many of the simpler tests.

As this paper is supposed to be a limited report of cases, I will purposely avoid taking up the technic of these tests. I might, however, touch on a few points of the cerebellum. Biologically the Vermis is the oldest portion of the cerebellum and its development goes more or less side by side with the necessities of equilibrium. The middle lobe of the hemispheres is known to receive fibres from the spinal cord, carrying knowledge of the position of joints and the tension of muscles. It also receives fibres from the labyrinth which convey impulses and knowledge concerning the maintenance of equilibrium.

The cortex of the hemispheres is younger in development. It has no motor function as in the cerebrum, but it receives afferent axones from the cerebrum. The efferent axones run to the intrinsic nuclei where impulses are elaborated and sent out to the ganglionic cells of the cerebrum, medulla, and spinal cord, and is of such a nature as to influence muscle tone and consequently the maintenance of equilibrium.

Thus, the cerebellum is a co-ordinating organ and if the reflex arc is broken in either the afferent or efferent portions, ataxia results.

But as far as the elaborating portions or as one might say, the relay points in the intrinsic nuclei are concerned, these have been shown to have entirely to do with muscle tone, and irritation of these nuclei produce tonic convulsions in distinction to the clonic convulsions as the result of cerebral motor stimulation.

Hence the first symptoms to expect and look for in cerebellar disease would be a loss of co-ordination as indicated by a failure to maintain equilibrium and secondly the loss of muscle tone which might be indicated by a flaccidity of the muscles of the extremity but more often of the muscles of the trunk itself.

When once the cerebellum has been signaled out as the seat of disease it is then obligatory on the part of the diagnostician to make a differential diagnosis by the process of elimination. This as I said before, is done in a systematic manner by taking into consideration the function of each cranial nerve, always remembering that some basal pathology may exist which may involve the roots of one or several cranial nerves and which if given too much emphasis, might lead the diagnostician astray.

Starting with the olfactory nerve and nasopharynx, I might emphasize that both these cases showed a profuse naso-pharyngeal discharge. This would not necessarily mean that the disease would be located in the anterior or middle fossae, but this actually was the result of the extensive intracranial pressure.

In both of these cases eye muscle symptoms were present. In Case 1 there was a distinct ptosis, indicating a weakened levator, (third nerve). In Case 2 there is a distinct rotation of the eye inward which might be due either to excessive tone on the internal rectus or a paresis of the external rectus. The internal rectus is supplied by the third nerve and the external rectus by the sixth nerve.

Cushing has pointed out that there is an important fasciculus known as the posterior longitudinal bundle which passes forward from the medulla and is so connected up with the nuclei of the seventh, sixth, fourth, and third nerves that it frequently happens that when this posterior longitudinal bundle is affected by disturbances in the posterior fossae, there are also associated disturbances in these nerves.

The fifth nerve has shown no signs of involvement in either case at any time. The seventh or facial nerve showed disturbance in Case 1 only immediately after the accident. The eighth or auditory nerve I left entirely to Dr. Elliot. This, as he may possibly explain to you, showed considerable disturbance.

The nystagmus that Dr. Elliot noted in this case (Case 1), he considered entirely a cerebellar nystagmus.

The ninth or glossopharyngeal nerve showed no disturbance except possibly some disturbance of taste in Case 1.



The tenth or vagus nerve showed the disturbance of vomiting in both cases. The eleventh or spinal accessory showed the occipital tilting of the head toward the shoulder on the right side of the lesion. The twelfth or hypoglossal showed inequality in the motility of the tongue muscles.

Coming to the cerebral cortex I might say that there were no frontal lobe symptoms whatever except irritability in Case 1. There was no euphoria or undue happiness. No disturbances in the speech or other motor centres, except in Case 1 attributed to hypoglossal nerve root pressure (thick slow articulation).

No auditory or visual disturbances to indicate trouble in the occipital or temporal lobe, no choreiform movements to indicate trouble in the red or lenticular nuclei, no spasticity, no aphasia, no trouble in the hypophysis.

Passing to the posterior fossae there is no trouble of a bilateral character involving the seventh and eighth nerves.

Coming to the reflexes we find they are all practically normal which is quite characteristic of cerebellar disease.

Considering next the motor symptoms, the vision is no help to the ataxia; the ataxia is not increased by shutting the eyes. The inco-ordination appears only during the active movement of the limb and does not increase toward the end of the movement, and finally the limb may remain steady when the object is attained.

Some patients may be able to conceal the ataxia as there is a voluntary center in the frontal lobe connected to the cerebellar cortex which if highly trained, may be able to obscure the symptoms.

Tumors of the vermis affect the gait more than do tumors of the hemispheres and when exactly in the mid line, the tendency is rather towards falling forward or backward than to one side.

Vertigo is dependent upon interference with the vestibular portion of the eighth nerve in any part of its course from the semi-circular canal to Deiter's nucleus, and thence to the cortex of the middle lobe and is entirely independent of ataxia although each may aggravate the other.

Stuart and Holmes have worked out a method for the differential diagnosis between intra and extra cerebellar lesions. Thus when the patient complains that his giddiness consists in the displacement of external objects in front of him, it is found that both in the intra and in the extra cerebellar growths, this displacement takes place

from the side of the lesion to the opposite. Whereas when the sense of giddiness depends upon the rotation of the patient himself there appears a distinct difference.

In intracerebellar growths the rotation of self is from the side of the lesion to the healthy side while in the extracerebellar ones the reverse is true and the patient feels as if he were turning from the healthy side to that of the lesion.

Where a tumor is extracerebellar and involves the acoustic portion of the eighth nerve there is invariably some nerve defects on the side of the lesion.

Where the trouble is intracerebellar there is rarely any affection of hearing. This was true in both Cases 1 and 2.

Involvement of the facial nerve comes late and speaks for extra cerebellar trouble. As I said before the facial nerve was involved only early in Case 1.

#### EYE SYMPTOMS.

Paralysis of the external rectus frequently present has no diagnostic value. Conjugate deviation of the eyes to the side opposite to the lesion is rather frequent but deviation towards the side of the lesion is rarely seen except as a post-operative condition. True in Case 1 but not in Case 2.

Nystagmus is one of the classical signs. It is a slow deliberate jerking movement to the side of the lesion when the patient looks in that direction with a gradual recession to the middle line. Present in Case 1; partially in Case 2.

Paresis of the homo-lateral muscles often shown in the form of lordosis is not due to pressure on the pyramidal tracts because there is no spasticity and the superficial reflexes are retained. True in both Cases 1 and 2.

This is rarely found with extracerebellar tumors for these are so situated as rather to cause pressure on the motor fibres in the brain stem with consequent crossed paralysis.

A most important point in differentiation between intracerebellar and extracerebellar disease is the time of appearance of these symptoms (ataxia and vertigo). In intracerebellar cases they appear early. In extracerebellar cases they appear late and are frequently preceded by symptoms of pressure on the seventh and eighth, and often ninth, tenth and eleventh cranial nerves.

There are more features to this very extensive subject; for instance one must always keep in mind the possibilities of lues and spinal puncture should be made, not only to determine the Wassermann reaction, but also the character

and tension of the spinal fluid. This will always give a clue as to the patency of the aqueduct and the existence of an internal hydrocephalus. One must always keep in mind uremic conditions and the urine should be tested for albumen.

The history often will give a clue as to the character and hence the location of lesion. Is it a hemorrhagic cyst? It is an arachnoid cyst of traumatic origin? Is it a fibroma? Or a tubercular glioma?

Hemorrhagic cysts might occur anywhere in or near the cerebellum. Arachnoid cyst of traumatic origin is of course, extracerebellar. Fibromas generally arise from the fibrous sheath of the eighth nerve and are extracerebellar. Tubercular glioma are intracerebellar and are often partially cystic.

Case 1 showed trouble both of the fourth and eighth nerve roots but this proved to be from pressure somewhat remote.

It must be remembered that the symptoms developed by intracerebellar trouble are pressure symptoms and that these pressure symptoms are the result of a rather diffuse and hydrostatic pressure which does not generally press acutely on one particular nerve root but diffusely on several, and indeed where the aqueduct is closed on the whole brain structure in general so that in many cases the symptoms resemble an internal hydrocephalus. One must weight all these symptoms and select the ones which are most prominent in order to guess the location of the lesion.

Presenting these cases to you you will notice in the man that there are absolutely no signs of the former trouble. One might expect that the traumatism on the cerebellar hemisphere at the site of the former operation would leave some signs of inco-ordination but there are none as far as I have been able to observe.

In the young lady you will notice that her pointing tests are still a little bit out, especially, the left pointing test. She is also unable to balance herself on the left foot as well as on the right. These I attribute to the damage to the left cerebellar cortex as a result of the former large hernia. When looking straight ahead she shows no signs of paresis of the eye muscles but when looking to the left there is an internal strabismus of the right eye. This may be due to the indirect pressure tone on the oculomotor nerve.

In closing I wish to state that the diagnosis of these conditions is extremely complicated and the proper surgical treatment is certainly highly technical if carried out even approximately near Cushing's wonderful technic. Cushing gen-

erally taps the lateral ventricle as early as possible in order to release the pressure and stop the venous hemorrhage. This requires a separate trephine opening and is a delicate operation in itself.

Unless the general surgeon is confronted with the alternatives of immediate operation or death of the patient he may well hesitate to undertake these cases.

## A PLEA FOR INTELLIGENT TONSILLAR SURGERY.\*

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No apology is offered for presenting seemingly so ordinary a subject to this society for discussion and deliberation, because, there is no operation in the domain of surgery receiving greater attention by the profession today than that of the tonsil. It is discussed by the conservative and the liberal—by the careful and the careless operator. One group believe the tonsils are serving some important purpose in the animal economy and seldom disturb the general system; and that if it does, nature assisted by local applications will correct the disturbance. Other investigators are of the opinion that the tonsil is a useless part of the anatomy and should always be removed, like the appendix, no matter what the provocation.

Presented with this situation, we must admit that the tonsil question has not been definitely settled, nor can we expect its conclusive adjustment until the physiologist and pathologist teach us the function of the tonsillar tissues in health and disease. Recent studies by Dr. George Wright has illuminated this hazy subject to some little extent by the following contribution: He has shown that at the periods of the molar tooth eruption, namely, at the ages of two, six, twelve and seventeen years, the tonsils enlarge somewhat, returning to a normal condition after the complete eruption of these teeth. Wright regards this enlargement without infection as an evidence of the normal function of the tonsillar gland.

With insufficient data to place the tonsil operation on a scientific basis we can do no better than continue reporting our observations, investigations, and experiences—thereby making for a better understanding to distinguish between the operable and the nonoperable tonsil.

It will be quite unnecessary for me to mention what tonsils should be operated, but I

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deem it all important to point out the conditions which should contraindicate operations on the tonsils.

First: Never operate on hemophiliacs or bleeders.

Second: Never operate on syphilitics or when acute infections are present.

Fourth: Exercise great caution in operating at the extremes of age.

Hemophiliacs or bleeders are fairly common. Never neglect getting the clotting period of the blood, when the history points to this condition.

During the early part of 1917, Dr. Allen, then an interne in St. Luke's Hospital in Chicago, did some original work on coagulation of the blood for the nose and throat clinic. He found the percentage of hemorrhages in individuals following tonsillectomy was greater in those persons whose coagulation was normal than in those whose coagulation period was higher or abnormal; therefore, it would seem that the coagulation of the blood outside the body depends upon a different cause than the coagulation in the living bloodvessels. So far as the use of drugs is concerned, we have had nothing added to our knowledge of late, as far as I know.

As an illustration I will cite a case which came under my observation some years ago: A child's tonsils had been operated and six hours later she was dead from hemorrhage. The parents then admitted that a dentist had discovered her infirmity and had cautioned them about the dangers of bleeding from cuts and wounds, but they neglected to so inform the surgeon. Had this information been in the possession of the operator the results might have been different. At any rate an operation would not have been performed until the clotting period of the blood was known.

The clotting period can often be shortened by the use of remedies, especially a course of calcium-sulphide, and after the operation by applications of thrombo-plastin.

Dr. Richard Greer, formerly in the Department of Physiology of the University of Chicago thinks well of fibrin ferment or thrombo-plastin. This ferment was first introduced to the profession some two years ago by Dr. Hess of New York. During the year 1916 I had the National Pathological Laboratory of Chicago prepare this ferment and used it to some extent in tonsillar hemorrhage. In my experience, I have found it very effective when applied locally. I have had no experience giving it internally. Recently, E. R. Squibb & Co. has

made the ferment and put it on the market in a form that can be kept for several months without deteriorating. They recommend it internally as well as locally.

In considering syphilis, a physician would scarcely make the grave mistake of operation on patients in the first and second stages, but in the tertiary period it is different. There is no apparent indication of the disease. The patient frequently complains of sore throat and upon examination, hypertrophied tonsils covered with a thin grayish white membrane without ulceration is noticed. The cervical glands are usually somewhat enlarged. These findings are sufficient to suspect syphilis, especially if the person is an adult and had never complained of previous sore throat. In 1916 a man 41 years of age consulted me about a sore throat, stating he wanted his tonsils removed and to show he meant what he said, he paid me the fee in advance. Appearances such as the above caused me to suspect lues, but as he denied all knowledge of ever having had a primary sore, or any secondary manifestations, I decided upon having a Wassermann test of the blood. This proved to be strongly positive. Even with this evidence the patient refused anti-syphilitic treatment, but demanded an immediate operation; however, I delayed the issue, administering in the interval small doses of iodide of potassium, this being given him without his knowledge. At about this stage he developed a sore eye; there being no pain, he decided the infection was from dust and did not deem it necessary to ask advice. The inflammation not yielding to his remedies, he consulted me. When I told him it was a complication of syphilis, iritis, he completely surrendered and obediently submitted to the proper treatment. So far as I am aware, he is still enjoying his tonsils. Had I operated this man's tonsils as requested, there is no doubt I would have had a very unhappy experience. I learned my lesson in 1907, when a woman of about 30 years of age persuaded me to remove her tonsils. After having her in the hospital under observation for one week, and not suspecting lues, I complied with her request. At that time we were not making Wassermanns in Chicago, the first one being made in 1908, by Dr. W. J. Butler.

These tonsils were so fragile and friable that a curette seemed more suitable than a knife and vulsellum forceps for operating. The hemorrhage following the operation was slight, but severe and protracted hemorrhages ten and

twenty days later led to a careful investigation of her life history; and it was decided she was a syphilitic, which was proved by properly directed treatment.

Surgical operations on the tonsils are not permissible during acute inflammations. In the abscessed variety of tonsil it is safer to wait until the abscessed cavity has been completely drained and a normal appearance is present before attempting operation.

The age of the patient has much to do with determining the method of operation. Speaking in a general way, up to the age of 12 years, I think a tonsillotomy operation is preferable to dissection or snare. In mentioning tonsillotomy I refer to an instrument that does a tonsillectomy and not a tonsillotomy. For example, a Sluder or some of its modifications. The La Force adenotome for the adenoids. After mastering the technic of these operative procedures tonsils are removed with great rapidity and thoroughness. Of course this necessitates a general anesthetic. While the tonsillotomy causes considerable traumatism, the child experiences little discomfort following the operation. For older children and adults I prefer the dissecting method of operation to all others. This can be performed with two instruments, a pair of curved scissors and a vulsellum forceps. The patient sitting in a chair, the tonsils are injected with either one of the following mixtures:

Cocaine Hyd. 1 gr.  
Adrenalin Chloride 40 M.  
Normal Saline M. cc., or

Novocaine 4 grs.  
Adrenalin Chloride 40 M.  
Normal Saline 200 M.

A complete anesthesia follows.

With novocaine there is no danger of toxic poisoning as occasionally is witnessed from the use of cocaine. This operation recommends itself by the absence of hemorrhage and ease of accomplishment and I believe will meet with the approval of those surgeons who become acquainted with its technic.

Dangerous complications following such operations are due in a majority of cases first, to negligence in diagnosis on the part of the operator; and second, to inexperience and a defective surgical technic. Some accurate and definite knowledge by the proper use of our eyes will determine the form, relation and attachment of the tonsil to the surrounding structures. By palpating with the finger and the

use of a hook we learn the tonsil's density and mobility.

It is not my purpose in this paper to say what tonsil operation you should perform further than to suggest that operation which is founded on sound surgical principles—the operation that will give the patient the least pain and discomfort, with the minimum amount of danger.

In conclusion I would suggest that an adequate study should be made of each case before determining the treatment. Any physician who advises nonoperative interference in marked mouth breathing children, bequeaths to that child a life heritage of faulty physique, whether it be a pigeon breast, a deflected septum, a deaf ear or a defective mentality. When an operation is decided upon, it should fulfil the following requirements:

1. It should be safe.
2. Complete.
3. Painless.
4. Bloodless.
5. Shockless.
6. Without complications, and
7. Without deformities.

Physicians should not be satisfied with their tonsillar surgery until they have attained the above standard of skill.

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#### PYELITIS IN CHILDREN.\*

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In February, 1915, I was called to see an eight months' old baby girl, who had been suffering from an infection of the bowels for a week. This was accompanied by an erratic temperature reaching as high as 104 daily. On examination there was distinct pain manifested on moving the right leg, which the child kept strongly flexed. The diagnosis seemed to rest between a bowel infection with a possible appendix involvement and a hip joint disease. The stools had improved sufficiently to show that the continued temperature and other signs of a sick child could not be attributed to this course. Measures used did not improve the condition and the case was referred to a pediatricist.

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After reviewing the history, he requested that a urinalysis be made to ascertain the presence of pus, which was reported positive. Thus, the diagnosis of pyelitis at once was made, the fog was lifted and the whole case opened like a book.

My embarrassment was somewhat relieved when this same physician stated to me that he had a similar experience early in his practice, when a child of a well-to-do family was stricken ill and he floundered in the dark until a consultant not only relieved him of his predicament, but his patient as well.

This was my first recognized case of pyelitis in a child in nearly fifteen years of practice. In the two and one-half years since this, I have met with five cases.

Here, gentlemen, is the reason for this paper, to impress upon you the fact that there is such a condition as pyelitis in infants and that it is far more common than the average physician believes. Many of the cases of long standing infection attributed to the bowels and improper feeding that waste away and perish, are in reality an infection of the kidneys, which are neglected by carelessness in not making thorough examinations and the oversight in examining the urine. This neglect is a sad reflection on the physician of to-day and the only way to have it more frequently diagnosed and recognized is to dwell on it, discuss it, show the other men your mistakes so that it may leave an indelible impression that every physician will be on his guard.

A brief review of the disease at this time will not be amiss. Urinary infection occurs in 1 per cent of all cases of childhood. Pyelitis is one of the most common of all the so-called obscure causes of fever in infancy and childhood. It was first described by Escherich in 1894. It predominates in female babies, some putting the ratio as high as 10 to 1. In my own experience, all six cases were in girls. It occurs at any age, although the most susceptible age seems to be between the sixth and twenty-fourth months. Two of my cases were in children over three years. The colon bacillus is the organism usually found, although in cases of long duration the tubercle bacillus have been demonstrated.

The theories as to the entrance of infection to the kidneys, are: First, that the bowel discharges laden with colon bacillus easily come in contact with the female genitals and enter the urethra passing into the bladder and through the ureters, localize in the renal pelvis. This is termed ascending infection. The other

theory is that the infection gains entrance directly into the lymph and blood streams. The mucous membrane of the vulva and the urethra being irritated or broken, the bacteria reach the periurethral and periureteral lymph streams which have free communication with the kidney. This is also true of the mucous membrane of the intestines, and the colon bacilli may reach the pelvis direct without any involvement of the urinary tract below the kidney.

The intestine is not the only source of infection as cases are reported as arising from otitis media, infected tonsils, and bad teeth. Thus, any condition that will lower the resistance of the child may be a predisposing cause.

The urine does not always show pus, as occasionally the ureter becomes plugged with infected material; nor does the presence of pus always denote a pyelitis, as the kidney is capable of excreting it without becoming affected. It is a necessity to make repeated examinations of the urine that the condition will not be overlooked.

This is collected in infants by various methods. The watchful waiting policy is a sure one although somewhat tedious. Attaching a wide mouthed bottle by adhesive strips to the pubes and perineum is quite satisfactory, or placing the patient on a rubber sheet with a slight depression in the center from which it may easily be collected. The urine shows pus, is acid, and occasionally red blood cells and casts are present.

The pelvis of the kidney is the part usually involved, but in cases of long standing or of a recurring type due to the lowered vitality the deeper structures are invaded.

#### SYMPTOMS.

The acute cases have few marked symptoms. The most important are the onset with a chill and a high temperature. It is pointed out by Smith that a chill in a child under two years of age is strongly indicative of urinary infection. The temperature may rise to 104-5 and this with an extreme restlessness are the most striking characteristics of the disease. The findings are few and this negative condition is one that should make the attendant suspicious of the urinary involvement. The bladder and kidneys are not especially tender, neither is there anything unusual in the abdomen. The detection of frequent and painful micturation is an aid. But the point to be impressed is that, having a child, with a temperature of 104 or over, extremely restless, which condition continues, after ordinary measures of cleansing

the bowels and correcting the diet have been done and no other manifestation exist, examine the urine. This is the picture in the early cases, but the longer they exist, the more pronounced the symptoms and the greater the involvement of the tissues. The child becomes more toxic, is listless, digestion is deranged, develops anorexia and inanition and either reaches a chronic state with intervals of improvement and relapses or gradually passes to a fatal termination.

The prognosis can be said to be good, but many factors are to be considered. The severity of the infection, the length of time it has existed, and the resistance of the patient.

The early cases yield readily to treatment with less possibility of recurrence, but they should be watched and treated for a long time after the symptoms subside.

The chronic or neglected cases frequently die not from the urinary infection so much as from intervening conditions that arise from the lowered resistance of the patient.

#### TREATMENT.

Prophylactic; accepting the theory of ascending infection, it is advisable to instruct mothers and nurses to cleanse infants carefully, that the urethra and vulva should not be contaminated by feces. This is especially important during warm weather when diarrheas are frequent.

#### GENERAL.

The most important point in treatment is the necessity of large quantities of water and fluids in general, thus keeping the kidneys thoroughly flushed. Nursing babies should be kept at the breast as the mother's milk is particularly favorable to combat infection and maintain the child's resistance. Nourishment should be taken in abundance, those of liquid nature and an alkaline base, as it is essential to maintain and fortify the system against a deeper bacterial invasion. Malt soups and vegetables are highly recommended.

Medicinal measures are quite important. The greater factor here is to make the urine alkaline and keep it so. For this, potassium citrate has proven the best agent. This is given in large doses, 90 to 120 grains daily and continued for a long time. Hexamethylen in one grain doses is excellent but can not be used for any length of time, owing to the irritability it produces. This is also true of salol. Cathartics and close observation of the bowels is, of course, a necessity.

Vaccines have proven of value in some hands,

while Abt states he has not found the slightest benefit from them. It would appear that in the presence of a pure culture infection like the colon bacillus we should have an ideal condition to prove the merits of this form of therapy. In two of my cases I used stock vaccine of a colon bacillus and felt that I derived some benefit in the reduction of temperature at least, if not in the shortening of the disease.

In conclusion, permit me to emphasize again, the frequency that this disease occurs. The necessity for more thorough examination of babies, the importance of the examination of urine, the early recognition of the infection. Seek and ye shall find.

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#### VESICLE CALCULUS.\*

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I have chosen from my varied experiences in medical service in Mesopotamia, an affection which is most common over there and quite uncommon in this country, making it therefore a suitable subject to bring before you. I speak of Vesicle Calculus.

During my college course at the University of Michigan I had only one opportunity of seeing a stone in the bladder, but during my sojourn in the East I operated upon over seven hundred of these cases.

There have been many theories proposed regarding the etiology of this disease. The most commonly accepted one is that the salts of the drinking water are dissolved in the blood, filtered by the kidney and deposited in the bladder, which crystals formed the nuclei, around which cystic calculi were encrusted. We know that any foreign body forcibly inserted into the bladder from without, will be the nucleus around which different deposits are formed. We know that one kind of crystal is deposited if the urine is acid, usually uric acid but sometimes oxalic and the carbonates and phosphates are deposited with alkaline urine. The former calculi being much harder than the latter.

In many instances in this country kidney gravel or kidney stone passing down to the

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bladder has been unable to pass the bladder sphincter and vesicle calculus has resulted. When we are dealing with this stone in the kidney there is usually a history of renal colic and blood in the urine, though neither of these need be present. One is quite prepared to grant that the kidney may excrete these salts which have become absorbed into the blood and that these excretions crystallize and form the renal and later the vesicle calculus, but that will not explain the fact that in certain localities this disease is extremely frequent. For instance many of my cases came from certain marshy localities along the Tigris and Euphrates rivers while above and below these sites the people were comparatively free from the disease. It is just at this point that I want to say that the researches that have been made in tropical medicine, or perhaps I had better say in parasitology, during the past few years have tended to further our knowledge as to the action which certain worms might play in connection with the formation of vesicle calculus. When I first studied bilharzia in the laboratory of tropical medicine in Liverpool, I learned of its affinity for the mucous coats of the bladder and rectum, and later when I came in daily contact with such a variety of vesicle calculus in Mesopotamia, I was able to work out with the microscope the theory that this miracidium was the cause of a great deal of the vesicle calculus in this region.

For several years I recorded the localities from which these cases of vesicle calculus came and remarked that I had about as many cases of marked irritability of the bladder where no stone could be found as I had of the true vesicle calculus. There are peculiar lines on the face of those affected with bladder trouble which are almost pathognomonic and it often occurred that I found men giving symptoms of stone and yet upon sounding several times by different methods I was unable to detect its presence. The symptoms were characteristic; blood and pus were often present in the urine as was that peculiar pain at the end of the penis after micturition. A few years ago I began to read a good deal about bilharziosis as it occurs in Egypt and determined to examine my patients more carefully for the presence of this parasite. In a case which I saw in Liverpool where we demonstrated the bilharzia there was marked chyluria but in my cases it was seldom if ever present but the blood and pieces of spongy tissue which was passed after sounding these patients was full of bilharzia ova. I then realized that a large part of these bladder cases were

suffering from the bilharzia worm and that the nucleus of the stone was undoubtedly formed from an accumulation of foreign bodies in the shape of mushy clumps of bilharzia tissue.

In order that you may better understand the bilharzia worm (or *Schistosomum Haematobium*) let me sketch briefly its life history. Bilharzia worm is endemic in Egypt, the Soudan, and in west parts of Arabia. It belongs to the group of Trematodis but is distinguished from the majority of this group by having male and female separate individuals. The male worm is about 1 cm. long, milky white in color, cylindrical in shape with tapering extremities. Microscopically its body seems to be studded with minute warty projections tipped with short bristles. Two suckers, one behind the other are on the under surface of the body near the anterior extremity. The body is thin and flattened, the lateral margins of which are folded toward the ventral surface to form a long canal, the gynecophoric canal, in which the female lies during the period of sexual activity. The female is longer than the male worm and is often found lying within this gynecophoric canal with the anterior and posterior ends protruding although she can completely withdraw herself into the canal when occasion demands.

In the human bodies these worms are found very small in size in the portal and mesenteric veins but here do not seem to be sexually active although the male worm carries the female worm with him. The other common habitat of the worm is in the vessels of the bladder and rectum and here it is that the worm is fully developed and sexually active. It would therefore appear that the worms travel against the blood stream from the liver to the mesenteric veins and from the vessels of the submucous tissues of the bladder and rectum, and less commonly reach the lungs and general circulation.

It is therefore in the walls of the bladder and rectum that this worm deposits its ova and as a single pair of worms produce hundreds of ova, one can see that where there are a large number of these worms present great proliferation of the mucosa is produced, and a spongy tissue which resembles papilloma or epithelioma in appearance is produced. These papilloma are exceedingly friable and bleed easily so that the contraction of the muscle walls of either of these organs produces severe hemorrhage. The ova varies from 15 to 40 microns in length and about 10 to 15 in width. The peculiar anterior spine is noticeable and when these ova come from the bladder it seems to be centrally

located, anteriorly, but ova coming from the rectum are peculiar in that they have a lateral spine. If some of this spongy tissue which is passed in the urine is placed on a slide under the microscope and a drop of water added, the bilharzia ovum is seen to burst its shell and we have the miracidium presenting itself with a sharp anterior spine and the score or more cilia laterally and posteriorly, propel the miracidium through the water quite rapidly. The cycle of the bilharzia worm is still uncertain but the Welcome laboratory in Khartoum, Egypt has advanced the theory that man is the intermediary host. There are two ways by which this could be accomplished, one is through drinking water and the other by the penetration of the miracidium through the skin, thus finding its way by the blood stream to the liver. The ova, whenever they are passed in the urine and touch water, become active and with their sharp anterior spine and cilia by which they are actively propelled are able to penetrate the epidermal tissue. This latter theory is upheld by medical men in Egypt, since they find it is the people in the rice fields or swampy regions who are most affected with this disease, for these men and boys go barefooted to a great extent, and work in the irrigated fields, while women living in the same district are affected to a much less degree. So it is with the conditions about where I worked. Nearly all the cases of stone came from the swampy region of the Euphrates valley and less than 1 per cent of the women were affected.

#### TREATMENT.

In the treatment of vesicle calculus we find that when patients are afflicted with both bilharzia and calculus, the removal of the cause of the bladder irritation, along with proper explanation of how to keep away from the infected region, will go far toward affecting a cure. When only the spongy growth is present incision by the perineal lithotomy route, with a curetting of the bladder, removing the spongy and hypertrophied tissue is practised by physicians in Egypt. I have tried it myself with varying results, allowing the bladder to drain through the perineal incision until the fistula heals spontaneously. If there are complications of strictures, sinuses and fistula along with stone, it is best to treat the former first and after cleaning out the fistula and sinuses we dilate the urethra and then the removal of the stone can be attempted. Fistulas are the most common complication of bilharzia and I have seen the superpubic and perineal region as well as the scrotum riddled with fistula leading to

the urethra and bladder. Often times a spongy growth projects from these openings, and not infrequently these are the cause of epithelioma in this region.

When a patient arrives complaining of calculus of bladder we put him through a certain routine before operation. When we find the urine acid there is as a rule no bacterial infection but if it is alkaline it is usually cloudy and full of pus. We wash the bladder once a day with warm boracic acid or normal salt solution; in fact we made it a rule to wash out the bladder at least once a day about three days previous to operations and if the infection is very bad we use daily bladder washings for a week, when we find that the urine generally clears up to a very marked extent. The method of washing the bladder is very simple and efficient. We insert a rubber catheter to which we attach a rubber tube to which in turn is attached an 8 ounce funnel filled with boracic acid solution. By raising the funnel we pass solution into the bladder and by lowering it we fill the funnel with the urine and water, and we can refill and wash it as often as we like until the solution returns as clear as when poured into the funnel. We can also ascertain the capacity of the bladder, and by passing the sound when the bladder is filled one can invariably detect a stone if present and can find out its size and general character in a great majority of cases.

*Choice of Operation.*—Lithopaxy or crushing of the stone is preferred by all the operators in India and Turkey who do any large amount of work. As proficiency in this method increases it is by far the operation of choice. The patient remains in the hospital only five or six days in all and as there is no cutting, the patients themselves are more than pleased at the quick method of bringing relief and will invariably flock to the doctor who uses this method. However, in England and America since there are a much smaller number of cases, the cutting method is generally employed. There are several methods of operation and I will not burden you with their description but will point out to you what modifications of the superpubic operation I have used. The text books tell us that the medium and lateral perineal incisions are preferable, excepting when the stone is of large calibre, but I have tried them all and next to the lithotrite I prefer the superpubic operation. If the bladder is comparatively clean a few days washing will fit it so that when we open the space of Retzius we have little to fear from its contents. We first place a catheter in the bladder and fill it with nearly eight



ounces of warm boracic solution and have dilated the rectum by injecting a few ounces of water in the Barnes's bag, so when we come to the bladder through the superpubic incision we find it presenting, and simply push up the fold of peritoneum with sterile gauze, pack on either side of the bladder, catch the bladder with a sharp hook, and then pass two large silk ligatures through its walls, which ligatures we clamp. The assistant holds these on either side while the operator plunges the knife length wise through the fundus of the bladder, carefully avoiding the large vessels.

The finger is at once inserted and the size and character of the stone determined, after which the incision is enlarged toward the fundus and the calculus removed with the stone forceps. The wound is then flushed from above and the bladder partly filled with normal saline solution. The bladder is then sutured with fine catgut inverting the mucous membrane and catching the walls with the serous coat. After this we test the bladder with warm salt solution and wash out all blood clots, taking precaution not to fill the bladder too full lest the mucous coat of the incision should be everted. The muscle which was simply divided with the handle of the scalpel is sewed with catgut and the final skin sutures are of silk worm. After the dressings are applied we untie the catheter and see that the urine escapes freely from it. This catheter is held in place with adhesive and is changed about the third day after operation. My only modification of the usual procedures in these cases is that I leave no drainage from above and I am careful that good drainage is obtained by the catheter. With this method the catheter is removed about the fifth day and the stitches the eighth. When a drain is left the patient has an objectionable fistula in the superpubic area, which takes a long time to heal and is a most tedious and objectionable dressing.

In case of very severe infection with a very large stone where superpubic operation is necessary, I generally made a transverse incision through the skin and use two rows of sutures in the bladder wall, using very fine catgut for the mucous lining and a second row of Lambert sutures through the muscle and serous coat of the bladder. This incision obviates extensive gaping of the wound by the pulling of the rectus muscle which thing is bound to occur when infection gets into a longitudinal incision in the median line.

## THE TREATMENT OF FRACTURES AND RESULTS OBTAINED AS OBSERVED IN MILITARY HOSPITALS OF AUSTRIA.\*

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Pirogoff has coined a word which may be used as defining War, he says "War is a Traumatic Epidemic," and as in the past most epidemics have concerned the internist so does this present world wide epidemic concern the surgeon for it falls to the lot of the Military Surgeon to help keep the morality rate of the wounded as low as is possible and to return over 90 per cent of all wounded soldiers back to the front. This is being done in both Austria and Germany.

It is repeatedly said that "war surgery is civil or peace surgery on a huge scale" but it has been our experience in serving in Austria's largest military hospital, one containing 10,000 beds, located in Bohemia, and equipped as one may imagine with most everything that is modern in the field of medicine, that even here the surgeon finds himself working under difficulties and cannot do the good, clean surgery as is being done everywhere at home. This is due to several causes: First and of most importance is the time of arrival of patients after having been wounded, being from three to five days in most cases. Second, every case received by us and having an open wound was infected and but few had received any medical care while enroute. Third, inefficient and insufficient intelligent assistance. Fourth, scarcity of medical supplies. Fifth, the question of time, each and everyone having too much to do.

We have had in our section, wounds of all description both large and small, fractures of every known variety and especially of long bones, infections, varying from a mild non-febrile to the most severe forms. In our treatment we have tried as many different methods as could properly and with safety be carried out, favoring that particular kind of treatment as produced best results in our hands.

In the care of fractures, and these were by far the majority of our cases, the aim was to apply extension and immobilization as early as was possible, this however only after an X-ray picture had been made and the nature of the fracture better studied and understood.

\*Read at the Annual Meeting, Upper Peninsula Medical Society, August, 1917.

Plaster of Paris casts were seldom used in femur fractures with large open or multiple suppurating wounds.

Here a posterior splint, or the limb in a hammock swing with extension applied either with adhesive plaster or mastesol (1) seemed to us the better method. Prof. Thöle (2) says that when a patient has multiple wounds such as made by numerous small American grenade or hand grenade a plaster cast serves no purpose. In these cases the patient very often develops fever and complains of severe pains, with abscess formation or constriction. He further warns against suspending a badly infected limb on the theory that through the lymph and venous circulation the infection travels centralwards. In these cases he recommends a horizontal suspension or with femur in semi-flexion.

In a fracture of the femur with a large suppurating wound high up on the posterior aspect of the thigh the choice of any particular method of extension and fixation is very difficult to make as no method is all perfect. By using a posterior wire splint (Cramer) or a modification of same as recommended by Prof. V. Eiselsberg with sufficient windows cut into same to prevent pressure on wound the case could be treated by lifting him onto a horse while in bed, and here the patient can help himself, not a little, and in this manner the dressing can be changed with but little pain and discomfort. Even here a perfect apposition which is most desired cannot be maintained as the splint must be removed at each dressing. A decided advantage to all and especially for the benefit and good of the patient is that the dressings need not be changed for three or four days when no fever is present and the general conditions of the patient is good. This not only gives the patient undisturbed rest but saves dressings and time and labor. And this is an all important economy practiced in every European War Hospital.

Fractures of tibia and fibula were treated on the same principle as were femur fractures. However in these cases it is not so difficult to follow out a certain course of treatment and the results are usually more satisfying than in the case of fractures of upper third of femur. For extension and fixation one may use several methods: Bucks, Double Incline, Hammock Swing, Pulley Splint, Steinmann Pins, Schmerz Clamps, or Klapps (3) wire extension from calcaneus.

The Steinmann pins have been tried but usually with discouraging results, especially were the results bad if the pin or peg was driven through the bone. Our experience has been

only to see the patient suffer intense pain, the nails becoming loose before union takes place, and the infection that so often follows. Gollammer (4) and many others have discarded the Steinmann pin fearing infection and fistula formation; they use instead the Schmerz clamps or wire extension of Klapp.

Fractures of the upper extremities were treated whenever possible with ambulatory splints such as are described and illustrated by Dr. J. R. Eastman (5), and it has been our good fortune to follow out and continue observing the patients treated by Dr. Eastman and his associates at Vienna during the winter and spring of 1917, and the results obtained and the apparent comfort given the patient has surely been very gratifying.

At the conference of the Military Surgeons of Germany and Austria held at Brussels April, 1915, Prof. Körte and Dr. Sebroth recommended plaster casts for immobilizing fractures and especially a straw plaster cast. The technic in application of the straw cast is briefly as follows: The limb is first padded, though not too much, and a few rounds of bandage applied, and over this and on all sides are laid long strips of straw, then a few layers of plaster or starch bandage are applied, and same immediately molded to the form of the limb. Windows are cut over the open wounds and though these may be multiple and large the cast is not weakened. It dries quickly, is an excellent cast when involving the hip joint, is cheap and always easily obtained.

Bridged plaster casts reinforced with aluminum rods or bands are much used and especially are they adaptable for the transporting of patients from field to hospital or from one hospital to another.

The question of amputation of a badly fractured and badly infected limb is hard to answer. Some are too conservative and others too hasty. V. Röthe (6) has given the following conditions for amputation:

1. When the bony and soft tissue are so destroyed that further conservative treatment is useless.
2. Gangrene as a result of arterial injury or fast bandaging.
3. Active progressive infection, general sepsis, tetanus and gas phlegmonae.

As the cases referred to have all been infected it is quite proper to discuss briefly the method of treating these suppurating wounds. The usual treatment of any infection; drainage, irrigation with some antiseptic solution and the application of a dry or moist dressing is still probably the most common method of treating



infections and may remain so for a long time. The open air sunlight method of dressing wounds has its advantages and is rapidly becoming more popular. It does away with the necessary change of dressing, and the granulation tissue is not destroyed with the removal of the gauze, the patient is more pleased, and the saving in material, secondary hemorrhages are immediately seen by patient and attendants and the saving of time to the doctor and others. Of the different antiseptic solutions in use at the present time there are probably three which to us have seemed the most desirable and which produced the best results, hydrogen peroxide, Burrow solution (7) and the now famous Dakin's solution. Peroxide and Burrow solution were much used as there was plenty of it and the results were satisfactory. Alcohol placed in wound was also good but this was too difficult to obtain and was therefore used but little. The use of the Dakin's solution we did not properly understand until we came to Vienna and continued the methods adopted by Dr. Eastman. Foreign bodies such as projectiles, bone splitters, bits of clothing, etc., are first removed whenever this is possible and when they act as a source of infection or interfere with the natural functions. The removal of foreign bodies has been made much easier through the use of the Bettman operating cryptoscope (8).

Much has been written both here and abroad in regard to the use of Dakin's solution but especially have the Germans given it a fair trial and the following is a brief summary of the results obtained by them. Dr. Winkelmann (9) late in 1915 received a short report with formula of the solution following a meeting of French and English Surgeons on the Western front. He immediately decided to try same at his hospital in Barmen and began his series in November, 1915, and gave his conclusions in October, 1916. His patients consisted of over 1,000 with and without fractures, infection of joints, gas burns, especially gas phlegmonae, boils, etc. The cases varied from one to ten days in age i. e. after having received the injury. He has also treated 1,000 cases of gas burn in six weeks without a death. He urgently recommends Dakin's solution to surgeons treating war injuries and predicts within a short time the handling of war injuries with absolute safety. The length of treatment is shortened, it is absolutely safe, and the pain is much diminished, and lastly, it too saves much supplies. The formula used by Dr. Winkel-

mann differs a little from that used by Dakin and is as follows: Calcium chloride 200. Soda crystals 250. Boric acid crystals 160. Water 10,000.

#### CONCLUSIONS.

1. War surgery can be made into peace surgery and called such only when conditions and environment are the same. Proper treatment of injured at front and in field hospitals; rapid transportation of patients to Base and Reserve hospitals; distribution of the wounded according to the nature of injury, similar injuries and fractures for instance, placed in a section containing X-ray, etc., that the use of the X-ray may be had in studying the result of fractures without transporting the patient, bed and all for blocks and into the roentgen room. Sufficient supply of material, and help in proportion to the number of patients.

2. The treatment of fractures to be followed out on the principle of extension, immobilization and adequate drainage without delay. Use that method which gives best results and such splints, etc., as can be found. Patience is a good asset. Many badly infected femur fractures unite and stop discharging only after months of patient treatment. Amputate only when all other treatment fails and a life can thus be saved. Repair of badly united fractures should not be undertaken until months after the wound has healed.

3. The use of air and sunlight should be encouraged. It not only saves material which is expensive, and often impossible to obtain, but is also time and labor saving.

4. And though Dakin's solution is not the only methods of treating infections of war it would be well for all to study and learn its use. And as Dr. Eastman says "Any Military Surgeon who goes abroad without thoroughly understanding the use of Dakin's solution does both himself and his Country an injustice."

#### REFERENCES.

1. Mastisol Powdered Resin 5, Alcohol 50, Benzin 25 and Venice Turpentine 5.
2. *Kriegs Chirurgische Hefte*, Band C. 4.
3. *Munchen Med. W.*, 1914.
4. *Kriegs Chirurgische Hefte*, Band XC. V. I, 4.
5. Eastman: *J. A. M. A.*, July 28th, 1912.
6. *Kriegs Chirurgische Hefte*, Band XC. V. I., 4.
7. Burrow solution 4 per cent solution aluminum acetate.
8. Bettman: *J. A. M. A.*
9. Winkelmann: *Kriegs Chirurgische Hefte*, Band C. I., 4, October, 1916.

# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman.....Owosso  
Guy L. Kiefer .....Detroit  
W. J. Kay.....Lapeer  
W. J. DuRois.....Grand Rapids

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October

### Editorials

#### INGUINAL HERNIA.

The recent physical examination required by the draft regulations revealed a somewhat surprising prevalence of inguinal hernias. In connection therewith it is interesting to review a discussion by Davis of 1500 cases operated upon by the staff of the Massachusetts General Hospital from 1908 to 1914. This discussion does not include the acutely strangulated hernias.

The following are the statistics presented: The youngest was ten months, the oldest 77 years; eight were over seventy; 397 were between twenty and thirty. There were 1,388 males and 112 females. In 1,244 cases one side was operated upon; in 256, both sides. In the 1,500 cases there were 1,756 operations. Bassini's operation was done 834 times; Ferguson's 764; Halsted's fifteen times; in 24 instances the technic was varied. In sixteen cases orchidectomy was done for maldescended testicle. In fifty cases the undescended testicle was brought down into the scrotum; in one case it was put back in the abdominal cavity.

The bladder was injured in two cases and sutured without ill effect. The iliac vein was never injured; the vas deferens was cut seven times. The intestine was opened twice, sutured without bad effects. The mortality was 0.53 per cent. Complications, non-fatal, were noted in 438 cases, the most important being sepsis.

The most interesting part of the paper is the end results in 754 of the cases which were followed up for a period of years. Eight patients

died in the hospital after operation; eleven died of intercurrent disease within a year; 577 are reported as entirely well, or cured. Ninety-nine were classed as relieved; fifty of these were cured of the hernia but presented subjective symptoms of pain in the wound, or numbness in that region. Seventeen relieved showed a bulging in the line of the scar; eight had varicocele; three had atrophied testicles; two had keloid in the scar; one had a persistent sinus. Fifty-nine had definite recurrence within the year; five had double recurrences; two are known to have recurred, making a total of sixty-six recurrences or 8 per cent of the cases traced. It is likewise interesting to revert to the literature and ascertain that in the New York Ruptured and Cripple Hospital there were 9 per cent recurrence in 1,002 operations.

Operative cure is attended with a low mortality that may almost be conceded as nil. Permanent radical cure may be confidently looked for in the vast majority of cases. Successful results will be secured more frequently if the aseptic technic is rigidly observed, clean dissections made, conservation of nerve supply enforced, high ligation of the sack employed and sutures so inserted as to secure careful coaptation without constriction of tissues and perfect hemostasis.

With these recent deductions before us it becomes incumbent upon the physician to recommend operation; the surgeon is likewise charged with the responsibility of careful observance of modern principles. The individual with a hernia is beginning to realize what comfort and relief is offered him and as this information becomes widely disseminated there will result increasingly larger numbers who present themselves for operation.

#### FEET AND SHOES.

Now would seem to be a very appropriate time for the medical profession to call for a reform in feet and the fitting of shoes.

Popular reforms of most any old thing are always with us in great numbers and just now when national conservation is an urgent necessity there are being urged on us more appeals to revolutionize many of our former habits of peace than we are able to appreciate or to bring into effect.

However there seems to be a number of reasons why the united influence of the profession should be used to remedy the evils involved in the universal manufacture of shoes which do not fit the normal human foot.



To the war can be laid many influences for good and evil. This brings us to the question of feet. For active work a shoe must allow a foot to perform its proper functions. This has been fully recognized in the regulations and an Army shoe has been designed to give the foot its full free purpose of bearing the full body weight without restraint.

The thousands of young men who are about to undergo intensive physical training with their feet cased in shoes designed to conform to the normal human foot will soon bear testimony, both objective and subjective, to the proper idea. Many of the thousands of physicians who are undergoing the same kind of drill now are for the first time realizing what a well fitting shoe means. They in turn are soon to have thousands of foot problems to solve in recruits.

These men will come home in time full of knowledge gained by real experience. They will deem it their duty to advise patients in many hygienic measures for health never considered proper or necessary heretofore, and the least of this will not be in the matter of feet.

A person in distress is quite apt to heed suggestions pointing toward relief.

Observe closely the endless number of deformed and misshapen feet hobbling along any town or city street. These feet, especially the female variety, come across the thresholds of our consulting rooms sooner or later.

Can you do anything to give the nation better feet?

O. H. Cox.

#### PHYSICIANS AND SURGEONS' LIABILITY INSURANCE.

Pursuant to its policy of placing before the insuring public, the latest development in indemnity protection, the *Ætna Life Insurance Company*, of Hartford, is at present submitting to the doctors of Michigan, in a new form, an old type of protection interesting to that profession, i. e., Physicians and Surgeons' Liability insurance.

The Policy is written on a so-called "group plan." It is issued only to members in good standing of Medical Societies. A single policy only is issued, written in the name of a group of the members of the designated Medical Society. It requires that before it shall become effective, a certain percentage of the membership of the society shall adopt this form of insurance and become members of the group. It is in no event written for less than a group of fifteen, and in societies of large membership, requires that at least 25 per cent participate.

A careful investigation has shown that possibly the chief cause of malpractice claims is indiscreet criticism of a physician's or surgeon's work by another physician or surgeon. One of the chief advantages of the plan is that in the formation of such groups, it will build up a "get together" spirit, and thereby, this cause for claims will be largely controlled.

In short, "Co-operation" is the essence of the "Group Form Plan."

Both the policy and its plan have been submitted in detail and favorably reviewed by Dr. Frank B. Tibbals, Chairman of the Medico-Legal Committee of the State Medical Society, and by Mr. Herbert V. Barbour, of the firm of Douglas, Eaman & Barbour, of Detroit, Attorneys for the State Medical Society. This firm has also been attorneys for the *Ætna* for a number of years, and Mr. Barbour will have personal supervision of all cases arising under *Ætna* policies. His wide experience with this type of litigation will insure to Group Members an adequate and intelligent defense.

The policy provides full and complete protection against every civil claim for malpractice brought by any person, based on any kind of alleged malpractice, error or mistake occurring in the practice of the assured's profession, until (if ever) it shall be shown that the damage was caused by the assured or any assistant of the assured while to any extent under the influence of intoxicants or narcotics or while engaged in or in consequence of the performance of an unlawful (criminal) act. Unlimited defense, including appeal bonds as security where necessary, is a provision. Over and above this item, its limits of indemnity vary from those of some other companies in this line, in that they are \$5,000 for the individual case, and \$15,000 for annual claims, instead of \$15,000 for all claims that may develop during the term that the policy is carried, irrespective of the length of time.

One of the most important features of the policy is its special provision relating to the adjustment of claims, the interests of the physician being carefully safeguarded, so that all cases will be properly handled to conserve the best interests of the doctor and medical profession as a whole. The Company can not settle in defiance of the assured's wishes.

The Group Form Plan is now being presented to the various County Society Memberships in each county, by the Company's representatives, and the plan should receive the fullest consideration of the Medical profession.

## Editorial Comments

The amount of material and limited facilities has necessitated the exhibition of considerable ingenuity on the part of the medical and nursing departments of the Allied armies and Red Cross Units. Many of our erstwhile surgical methods have been amended, new methods devised and details of treatment simplified. We at home are commencing to have conveyed to us the results that are being attained and as reliable reports of methods and principles are disclosed their adoption is becoming evident in hospital and civic practices. We have become fairly conversant with the Carrel-Dakin method of treating infected wounds. The paraffin treatment of burns and granulating areas appears to be a rational procedure. Recently there comes to us another method of treatment of infected wounds by means of a paste called "Bip."

It is reported that war hospitals in England have extensively employed it and report remarkable results. The method in general is to clean these infected wounds of all sloughing tissue and debris: to then wash it thoroughly with alcohol and then fill it with "Bip" which is composed of one part of bismuth subnitrate, two parts of iodoform powder and liquid paraffin sufficient to make a smooth paste. The wound being filled with this paste is then sutured, protected with a sterile dressing and left undisturbed for a week to ten days when complete union and healing is reported in a goodly percentage of cases. We have had no personal experience with this method and simply impart it for the benefit of those who may have occasion to employ it. We shall be interested in case reports and personal experiences. An appealing feature is the lack of necessity for doing frequent dressings. We are also reminded of its similarity to the old "Morhoff's Bone Plug."

Indirectly there has come to us some questioning as to the legality of the State Society spreading a special assessment for the purpose of creating a Patriotic Fund to be employed for furnishing fraternal assistance to our enlisted members. We have not for a moment paused to consider the legality phase of that action. We have been content to look upon it in a broader light, relegating technicalities and constitutional provisions to forgetfulness. We believe the action to be one of inspired patriotism and expression of organizational desires of collectively exhibiting a spirit of fraternal in-

terest and willingness to do "our bit" to encourage and aid those of our number who relinquish home ties, practices and personal comforts to serve their country where these services are so needed. We are unable to conceive how any of us who are without the Army or Navy medical departments can conscientiously object to the creation of such a fund or who would refuse to contribute their allotted assessment. It is the least that we can do. The remuneration of a Lieutenant or Captain in the medical corps is meagre indeed and those who have not acquired a reserve competency may be assured of the fact that their dependents will not suffer or want during their period of service.

If there are any who feel that they have grounds for objection to this assessment we will welcome their frank statement to the end that all doubt as to the purposes of this Patriotic Fund may be dispelled.

The publication of the Clinical Transactions will be resumed in our next issue. A lapse of one month is occasioned by summer vacations. Incidentally, we again extend the request for contributions of original articles. Please remember we are dependent on our members for these contributions, especially as there is not now available the papers that result from our annual meeting.

There has been much that has been said and written about cooperation and efficiency. These words are becoming so commonplace that their impressiveness is being lost. Cooperation is becoming a passive state and half hearted effort is endeavoring to pass under the guise of efficiency. A yoke of habit is manifesting itself and the rut of repetition is characterizing many of our personal activities.

As our winter sessions are being resumed we plead that the first session witness the construction of definite plans for future meetings. Plan to secure the attendance of every doctor in your district and delegate to each some definite duty or responsibility. Plan to invite essayists who have more than their own paper at heart and who will add an additional inspiration to society activity and life by discussing with your members the particular needs of your organization. Your officers cannot be expected to carry the burden alone, they need and want your assistance. Therefore we urge that you individually exemplify the true meaning of these words—cooperation—efficiency.



We have not received any communications from members in service in training, mobilization camps or "over-seas." We welcome the contributions of such correspondents because those who are doing their "bit" at home are eager to learn the experiences of those in these services. We therefore solicit such contributions to our pages.

The postponement of our annual meeting should not witness a waning of organization spirit. It is suggested that the respective Councillor Districts plan the holding of one or two day sessions of papers, discussions and interchange of friendly relations. The several county societies comprising each district can, with little effort and much profit, readily perfect the arrangements for such district meetings. Don't wait for someone else to start the movement. Write to the several secretaries, get together arrange your dates and programs and then work like beavers to put it across. In the end you will be rewarded and personal profit will accrue. What District will be First.

The transference of the Clinical Congress of Surgeons from New York to Chicago was deemed expedient under present conditions of National affairs and activities. Chicago surgeons have risen to the occasion and will present instructive clinics. The sessions in the evening will be addressed by men who have had extended experiences in war surgery. The date is October 22 to 27 inclusive.

There is a quart of truth in that old jingle about "A little nonsense now and then," etc. If it were not for this occasional nonsense, the vital statistics recorder would have a dry time indeed. Here are sample of some of the things he finds on death certificates under the heading Cause of Death. These are bonifide instances.

"Went to bed feeling well, but woke up dead."

"Died suddenly at the age of 103. To this time he bid fair to reach a ripe old age."

"Do not know cause of death, but patient fully recovered from last illness."

"Deceased had never been fatally sick."

"A mother died in infancy."

"Died suddenly, nothing serious."

"Pulmonary hemorrhage—sudden death (Duration four years.)"

"Kick by horse shod on left kidney."

"Don't no. Died without the aid of a physician."

"Deceased died from blood poison, caused by a

broken ankle, which is remarkable, as his automobile struck him between the lamp and the radiator."

"Blow on head with ax. Contributory Cause—Another man's wife."

## Correspondence

Wolverine, Mich., August 27, 1917.

Editor:

I have received my commission, 1st Lieutenant, M. R. C., U. S. A. Am very desirous before closing out to have a substitute here. Can you recommend any one? Quiet family practice, no opposition except an irregular, carries with it \$500 county work, limited territory, very nice people and quiet and conservative.

My people find a good deal of fault about my going. So long here they believe they own me. So would be glad to have some good reliable man in my place. Hope you have as President of the State Medical Society, some one in view or on list. Thanking you in advance.

Sincerely yours,

A. J. MCKILLOP, M.D.

Elk Rapids, Mich., Sept. 6, 1917.

The Journal of the Mich. State Medical Society,  
Grand Rapids, Mich.

Dear Sir:

The undersigned, a member of Grand Traverse-Leelanau county was issued a commission as Captain M. R. C. August 18, 1917. Has a wife and one child dependent.

A \$3,000 practice to turn over to some regular the day I am called. Nothing to sell. Cheap rent. Office furniture few. Send me a good man.

Yours truly,

LOUIS N. YERKES.

## Deaths

Dr. O. G. Youngquist, of Marquette died Sept. 7 after a long illness.

Dr. John T. Cooper of Muskegon, county physician for years and an anti-tuberculosis worker in that section, died during the latter part of August.

Dr. H. M. Bradley died in Augustana Hospital, Chicago, after an operation. Dr. Bradley was a well known physician of Bay City, having practised there for about fifteen years.

Dr. J. R. Shank of Flint, died suddenly at his residence on August 28.

Notice has also been received of the death of Dr. C. G. Pratt of Sparta, who was not a member of the Society.

## State News Notes

Gov. A. E. Sleeper will be asked to appoint a commission to make recommendations for the control of venereal diseases of the state of Michigan, as the result of the first municipal conference on sex diseases in the state, which was held at the Jackson public library Sept. 12.

The conference was attended by men prominent in business and professional life in various sections of the state, more than fifty persons being present.

The primary purpose of the meeting as outlined by Dr. C. G. Parnall, head of the Jackson department of public health, at the opening of the conference, was to consider the present menace of venereal diseases in relation to the public health. He stated the social aspect as it is, must momentarily be second in consideration, and that any movement designed to attack the problem must take cognizance of two main features, the prevention of venereal diseases in the army and the control of these diseases in the civil population.

Addresses covering every phase of the subject were given and resulted not only in a passage of a resolution asking the appointment of a commission, but tentative resolutions to stamp out prostitution within the boundaries of the state and to control venereal diseases and prevent their spread.

A permanent committee to carry on the work and bring the problem before Gov. Sleeper was appointed and is composed of the following members: Dr. W. H. Sawyer, Hillsdale; Miss Eleanor Hutzel, Detroit; Rev. Caroline Bartlett Crane, Kalamazoo; Dr. A. S. Warthin, Ann Arbor; Fred L. Woodworth, state dairy and food commissioner, Lansing; Dr. C. G. Parnall, Jackson; Dr. R. M. Olin, secretary state board of health, Lansing.

### RESOLUTIONS ADOPTED.

The tentative resolutions provide for the following:

Prostitution is to be suppressed vigorously and continuously through the enforcement of the state laws, but the issuance of certificates of health of prostitutes for use in soliciting is not to be included in this program.

Prostitutes brought to the attention of the police or health authorities are to be examined; and all persons, male or female, capable of spreading venereal disease are to be isolated under the provisions of the public health act, or local ordinance and treated at public expense as long as there is danger, in the opinion of the health officer, of their exposing others.

Under no circumstances are infected prostitutes to be "floated" into other communities, and if they are known to go from one community to another, the health officials of the place of destination are to be notified at once.

The state law requiring the reporting of syphilis and gonococcus infections by physicians is to be enforced to the letter, and, in addition, physicians are to be urged to obtain and furnish to the local health officers the names of the persons who are suspected of disseminating infection. The local health officers are therefore to investigate and super-

viser or isolate infection cases according to the circumstances.

To provide and encourage the instruction of young men and women in the advantage of a clean life and the dangers from venereal disease.

To provide adequate opportunities for expert diagnosis, treatment and advise for infected persons financially unable to secure proper attention for themselves.

To provide free laboratory tests for syphilis and gonococcus infections for physicians, and to encourage greater use of the tests for these diseases available at the laboratory of the bureau of communicable diseases of the state board of health.

In the absence of Mayor William Sparks, the conference was called to order by Commissioner John Bennett, who presented Dr. C. G. Parnall, the latter outlining the purpose of the meeting. A. M. McGee presided as secretary.

The first speaker was called on by the chairman was Rev. Lloyd Douglas, of Ann Arbor, who in referring to the proposed control of sex diseases and prostitution, likened the situation to that which confronted various governments which attempted the construction of the Panama canal. Disease, he said, was responsible for the failures, until the United States stepped in, and the task was pronounced a hopeless one. When the proper measures were taken it proved contrary to this, he said, as was shown by the results, and he predicted that the time will come when prostitution will be completely stamped out, and he advocated stringent regulations as the first step in this direction.

### VENEREAL DISEASES A GREAT DANGER.

Dr. W. H. Martin, who is associated with Major Snow in charge of the venereal disease work for the United States Army, was next called on and spoke in part as follows:

"The time was when the war department thought prostitution was necessary in order to prosecute war, but this belief has been dispelled. We may legislate but cannot control sex vice until we have stimulated in the minds of the young the idea of clean living. Venereal diseases are one of the greatest perils confronting an army. Ninety per cent of the men who go to fight in this war will return, but how many of them will be afflicted with venereal disease? The germ which lies in venereal diseases is a far greater enemy than the Germans."

In his address Dr. Martin referred to the fact that while in Battle Creek the prostitute is being banished from the city, a great peril lies in young girls from 13 to 16 years of age. He spoke of an incident that had come to his notice, that of a young girl who was brought home by a soldier. The latter range the bell and when the father came to the door said: "Take care of your daughter, sir; for I could tell you things she has been doing that are almost unbelievable."

### ARMY OFFICIAL SPEAKS.

Avery G. Clinger, stationed at Battle Creek as head of the war department commission on training camp activities, in his address said in part:

"The cantonment at Battle Creek is not the problem of that city any more than it is the problem of other cities in the state, especially those surrounding it. I have been in Battle Creek for



seven weeks, and I heard the prosecuting attorney say that only one soldier had been dealt with, and this man was up for being intoxicated.

“One of the worst things with which we are confronted are the young girls, 13 to 16 years of age, who think they are doing their bit by being of service to soldiers.”

Mr. Clinger outlined at length the work his commission is doing.

Major Neil M. Wood, head of the base hospital at Camp Custer; Dr. A. S. Whartin, head of the pathology department of the University of Michigan;

Dr. J. H. Kellogg of the Battle Creek Sanitarium; Dr. Richard Olin, secretary of the state board of health; Rev. Caroline Bartlett Crane of Kalamazoo, and Dr. W. H. Sawyer, regent of the University of Michigan, were among the other speakers who dwelt at length on the peril of venereal diseases to the army and civil population, and advocated the control of these diseases and prostitution.

Gov. Sleeper was to have been in attendance at the meeting, but while on his way to Jackson was called back to Lansing by a meeting of the war board.

REPORT OF STATE BOARD OF REGISTRATION OF NURSES.

JUNE EXAMINATIONS, 1917.

Number of subjects .....	8
Number of questions .....	71
Number of candidates .....	190 of whom
	127 were passed and
	63 failed.
Number for return examinations .....	31 of whom
	24 were passed and
	7 failed.
Total number candidates .....	221
Total number passed .....	151
Total number failed .....	70

The passing mark on each subject is 70 per cent.

The following Training Schools for Nurses were represented in the examinations:

Michigan Schools .....	38
From other states and countries .....	10
Total .....	48

Name of School	Candidates	Passed	Failed
Ann Arbor Private Hospital .....	1	1	0
Battle Creek Sanitarium .....	17	12	5
Return examination in three subjects .....	2	2	0
Bay City Hospital .....	2	1	1
Return examination in three subjects .....	2	2	0
Blodgett Memorial Hospital, Grand Rapids .....	6	2	4
Boulevard Hospital, Detroit .....	1	0	1
Return examination in three subjects .....	1	0	1
Brainerd Hospital, Alma .....	0	0	0
Return examination in two subjects .....	1	1	0
Bronson Hospital, Kalamazoo .....	1	1	0
Return examination in three subjects .....	1	1	0
Butterworth Hospital, Grand Rapids .....	22	12	10
Return examination in twelve subjects .....	5	2	3
Calumet and Hecla Hospital, Calumet .....	1	1	0
Calumet Public Hospital, Laurium .....	0	0	0
Return examination in one subject .....	1	1	0
Children's Free Hospital, Detroit .....	3	1	2
City Hospital, Jackson .....	1	1	0
Return examination in one subject .....	1	1	0
E. W. Sparrow Hospital, Lansing .....	2	2	0
Return examination in two subjects .....	1	1	0
Grace Hospital, Detroit .....	10	6	4
Hackley Hospital, Muskegon .....	5	5	0
Harper Hospital, Detroit .....	23	20	3
Homeopathic Hospital, Ann Arbor .....	5	4	1
Return examination in one subject .....	1	1	0
Hur'ey Hospital, Flint .....	1	1	0
Return examination in one subject .....	1	1	0
Lockwood Hospital, Petoskey .....	1	1	0
Mercy Hospital, Bay City .....	0	0	0
Return examination in two subjects .....	1	1	0
Mercy Hospital, Big Rapids .....	1	1	0
Mercy Hospital, Manistee .....	3	0	3
Mercy Hospital, Muskegon .....	1	0	1
Munising Hospital, Munising .....	2	0	2
Nichols Memorial Hospital, Battle Creek .....	6	6	0
Petoskey Hospital, Petoskey .....	1	1	0
Return examination in three subjects .....	1	0	1
Port Huron Hospital, Port Huron .....	1	1	0

Name of School	Candidates	Passed	Failed
Providence Hospital, Detroit .....	6	4	2
Return examination in five subjects .....	1	0	1
St. Joseph's Sanitarium, Ann Arbor .....	1	1	0
St. Joseph's Sanitarium, Mt. Clemens .....	3	2	1
Return examination in two subjects .....	1	1	0
St. Mary's Hospital, Grand Rapids .....	12	9	3
Return examination in nine subjects .....	3	3	0
St. Mary's Hospital, Saginaw .....	2	2	0
Return examination in five subjects .....	1	0	1
Samaritan Hospital, Detroit .....	3	2	1
Return examination in two subjects .....	1	1	0
Saginaw General Hospital, Saginaw .....	6	5	1
State Hospital, Kalamazoo .....	2	1	1
Return examination in one subject .....	1	1	0
State Hospital, Traverse City .....	4	2	2
Return examination in two subjects .....	1	1	0
U. of M. Hospital, Ann Arbor .....	25	18	7
Return examination in one subject .....	1	1	0
Woman's Hospital, Detroit .....	1	0	1
Schools From Other States	Candidates	Passed	Failed
Galt General Hospital, Galt, Ont., Canada .....	1	0	1
Guelph General Hospital, Guelph, Ont., Canada .....	1	0	1
Milwaukee County Hospital, Milwaukee, Wis. ....	1	0	1
Montana Deaconess Hospital, Great Falls, Montana ..	1	0	1
Royal Victoria Hospital, Montreal, Canada .....	1	0	1
St. Joseph's Hospital, Chatham, Ont., Canada .....	1	0	1
Sarnia General Hospital, Sarnia, Ont., Canada .....	0	0	0
Return examination in one subject .....	1	1	0
Southwark Infirmary, London, England .....	1	1	0
State Hospital, Topeka, Kansas .....	0	0	0
Return examination in two subjects .....	1	1	0
University Hospital, Chicago, Illinois .....	1	0	1

## WAYNE NEWS ITEMS.

Dr. A. P. Biddle reports that his brother, Gen. John Biddle, recently saw Majors McLean and Torrey, and found them well and hard at work.

Capt. F. H. Newberry is in the city on a ten days' leave. He has been appointed Neurologist and Alienist to Fort Benj. Harrison with the prospect of having much interesting and valuable work to do.

Lieutenant William R. Clinton, M. R. C. has been ordered by General Barry, commanding the central department, Chicago, to report for active duty to Major Frederick E. Phelps, recruiting officer for the regular army, at 21 Woodward avenue.

Lieutenant H. S. Berman has been ordered to Fort Riley, Kan.

The Wayne County Medical Society will hold its first regular meeting for the year, September 17.

The Detroit Trust Company has been authorized to receive and manage the Patriotic Fund of the Society. Those who contribute to this fund will therefore have the assurance that it will be competently and safely handled. No money will be expended except when directly authorized by the Patriotic Committee, and after careful consideration of the individual case. There are now before the committee several cases in which money is needed. The pledge cards have been sent to every member of the society and a generous response is hoped for by the committee. Make checks payable to the Patriotic Committee, Detroit Trust Co., Agent.

Lieut. M. F. Hosmer, late of the House Staff of Grace Hospital, has been ordered to recruit and take abroad a supplementary or partial hospital unit, to be added to the so-called "Crile Unit." His address is Base Hospital No. 4, American Expeditionary Force, France.

The address of Base Hospital No. 17, or "Harper Unit," is now American Expeditionary Forces, U. S. Army Hospital No. 3 (Base Hospital No. 17), France.

Lieut. R. H. Bookmeyer has been ordered to Fort Benj. Harrison.

Major Phillips, M. C., has been assigned to command Base Hospital No. 36, and has now been at his post for several days.

The following officers are reported to have been ordered to Fort Benjamin Harrison: Captains Jas. H. McCall, Robert A. C. Wollenberg; Lieutenants Clarence H. Belknap, Edmund W. Bolio, Edward Kanter, Robert M. Martin, Robert C. Mochlig, Grover C. Penberthy, William L. Sherman.

Captain Charles Barton has been ordered to active duty at Camp Taylor, Louisville, in the Division of Ophthalmology, Section Surgery of the Head.

The owners of the Kresge Building have voluntarily released all their medical tenants who are in service in the army or navy, from the obligations of their leases; or if they wish to keep an assistant at work and occupying the offices during their absence, they may do so on the payment of only a nominal rental. Further, men may have their offices back, if possible, when they return.

The Michigan Trudeau society is the name of a new medical organization that has been formed in this state for the purpose of fighting tuberculosis. Membership in it will be limited to physicians, and only those Michigan doctors will be eligible to join who have either done some service of social value in Michigan or whose professional records shows them to be specialists in this line. The officers are: President, Dr. V. C. Vaughan, Jr., Detroit; vice-president,



obligation, but we believe that this obligation is so plain that it will meet with universal acceptance, and we count upon your help with implicit confidence.

Whatever other sacrifices we are making, none can take the place of this offering we are going to make to our comrades who are giving everything.

THE PATRIOTIC COMMITTEE

OF THE WAYNE COUNTY MEDICAL SOCIETY.

DR. JOHN BELL, Chairman.

DR. WALTER J. WILSON, JR., Secretary.

N. B.—Make checks payable to The Patriotic Committee of the W. C. M. S., Detroit Trust Co., Agent.

### CALHOUN COUNTY

Regular meetings were resumed Tuesday evening, September 4, and the meeting was of a decided military nature. Previous to the meeting about forty members and guests assembled at the Post Tavern and enjoyed a six o'clock luncheon together. Several Medical Army Officers were our guests, at this function, and later at the meeting which was held in the City Hall beginning at eight o'clock.

Dr. Northrup of Grand Rapids was our out of town guest, while Major Neal W. Wood of the Army Medical Corps also appeared on the program.

Many of our number who are regular in their attendance were absent having enlisted in active military service, and having been ordered elsewhere.

Since the locating of Camp Custer at Battle Creek, will bring an unusual number of Army Medical men, our Medical Society has thought it best to hold special meetings for the balance of this year, and it was decided to hold a special scientific meeting each month. To meet this requirement the Program Committee was enlarged, and it is the plan to have meetings of special interest for the balance of the year.

### GRATIOT-ISABELLA-CLARE COUNTY

The regular August meeting of the Gratiot-Isabella-Clare County Medical Society was held Thursday, August 16, at the Park House in St. Louis. The minutes of the June meeting were read, and approved.

Dr. Pullen of the committee on illegal practitioners, reported A. Bernard was supposed to be in jail in Lansing, that he could be prosecuted as soon as he returned to Mt. Pleasant.

Dr. Brainerd reported he was the only member from Gratiot at the picnic in Mt. Pleasant in July, but that every one seemed to enjoy themselves.

Dr. Highfield attempted to have the letter from the State Secretary relative to the forming of a patriotic fund, which was laid on the table at the June meeting, again taken up for discussion. As there wasn't any support to Dr. Highfield the President declined to have the matter taken up.

Dr. W. H. Dodge of Big Rapids then read a very interesting paper entitled "New Methods of Treating Wounds Brought out by the War." His paper was discussed by Drs. Brainerd, Pullen, Carney and Brandstetter and others.

E. M. HIGHFIELD, Secretary.

## Book Reviews

**POLIOMYELITIS—IN ALL ITS ASPECTS.** By John Ruhrah, M.D. and Erwin E. Mayer, M.D. With 118 engravings. 293 pp. Lea & Febiger, Philadelphia.

A splendid compilation of the various facts concerning this disease and an able discussion of important and interesting observations. It contains in one volume the information one desires on the subject. It may be conceded to be the most up to date presentation of the subject and as such it is bound to be a welcome addition to every students library.

**HAND BOOK OF ANATOMY.** By James K. Young, M.D., F.A.C.S., Professor Orthopedic Surgery, Polyclinic, Philadelphia. Fifth Edition, 154 engravings. F. A. Davis Company, Philadelphia. Price \$2.00.

Received.

**PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING.** By Oscar W. Betha, M.D., Ph.G., F.C.S., Asst. Professor of Materia Medica, Tulane University. 2nd Edition, Cloth, Illustrated. Price \$4.50. F. A. Davis Co., Philadelphia.

This volume maintains the standard of the first edition and is up to the minute in pharmacopoeial changes and new drugs.

**FIRST LESSON IN SPOKEN FRENCH FOR DOCTORS AND NURSES.** By E. H. Wilkins, A. Coleman and Ethel Preston. Cloth, price fifty cents. The University of Chicago Press.

This is a handy valuable premier that will be of material aid to all entering army life.

## Miscellany

### PROPAGANDA FOR REFORM.

*Standardization of Serums and Vaccines.*—The misunderstandings and difficulties as regards the standardization of serums and vaccines are pointed out by G. W. McCoy, Director of the U. S. Hygienic Laboratory. So far legal standards have been formulated only for diphtheria and tetanus antitoxin. A tentative standard for antityphoid vaccine has been devised. This completes the list of standardized biologic products. Though not standardizable, vaccine virus and antirabic virus are tested for potency in the process of manufacture. McCoy reviews the work which has been done in the attempt to work out and standardize other biologic products, and brings out the many difficulties which are in the way (*Jour. A.M.A.*, Aug. 4, 1917, p. 378).

*Administration of Agar.*—O. H. Brown and W. O. Sweek favor the administration of agar in the form of a hot lemonade, chocolate or bouillon. For the preparation of a lemonade they direct to take 2 heaping tablespoonfuls of the agar powder, flakes or shreds; add to 1 quart of water, and boil till the agar is thoroughly liquified; sweeten and add juice of one lemon; then drink the entire quart while hot. They suggest that the quart of hot agar lemonade may be prepared in the morning, poured into a vacuum bottle, and taken leisurely during the day. They find that patients prefer to make use of orange, grapefruit, vanilla, maple or other flavoring in place of the lemon (*Jour. A.M.A.*, Aug. 11, 1917, p. 467).

Dr. J. S. Pritchard, Battle Creek; secretary, Dr. William De Kleine, Flint.

Just as our forms were closing we received word of the death of Mrs. W. T. Dodge of Big Rapids on Friday evening, Sept. 21st. Heart complications was the cause of death. Mrs. Dodge was Virginia Mulvey of Alma and had been married to Dr. W. T. Dodge but three months. On behalf of our members we extend to Dr. Dodge the sincere sympathy of our membership and assure him of our fraternal sorrow in his bereavement.

Dr. V. A. Chapman of Muskegon announces that he is now located in Milwaukee in the office of Dr. Nelson M. Black.

Dr. F. J. Groner of Grand Rapids announces his forced retirement from practice on account of ill health and advertises the sale of his instruments and office equipment. Those interested should write or call on Dr. Groner direct.

Dr. Harold S. Hulbert of Detroit is now Assistant Surgeon, Michigan Naval Militia, and was designated by the Surgeon General U. S. Navy to be the physician at the U. S. Naval Training Station at Great Lakes, Ill.

Dr. F. R. Ostrander has assumed his duties as health officer of Lansing.

The new Public Hospital of Hancock was opened to receive patients August 27th.

## COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

### WAYNE COUNTY

At a meeting of the Wayne County Medical Society, held Monday, August 6, 1917, the following resolutions were adopted:

The Patriotic Committee of the Wayne County Medical Society has been created for the following purposes:

1. To keep an accurate, personal record of all members of the Society who have received commissions or who have enlisted, together with all possible details of their family needs.
2. To authorize the publication of a War Bulletin containing medico-military news, etc.
3. To provide social and financial aid to the families of members in service where it may be necessary.
4. To provide a fund of sufficient size to make a substantial payment to members who have been in service, upon their final return, where such aid may be needed.
5. To co-operate in all possible ways with other medical committees relative to the war, which may exist now or may be created hereafter.
6. To equalize in every possible way, the burdens and sacrifices which are made by men who are in active service and to distribute those burdens among the members of the Society who remain at home.

Whereas, in order to provide adequate financial aid to members of the Society who have gone into the service of the Government, these members having in some cases, made the sacrifice of their total resources, it will be necessary to raise a large sum of money and whereas these sacrifices should be shared by those who stay at home; therefore

Resolved, that the Patriotic Committee be empowered to raise the necessary funds for this pur-

pose, by an assessment properly proportioned among the members of the Society who are not in service, and also

Resolved, that in the opinion of the Committee, this assessment should be not less than 3 per cent. nor more than 8 per cent. of the total annual income of each member.

Your patriotic Committee recognizes the grave and important responsibility which has been given to it, and will endeavor to carry out these resolutions as justly and as completely as possible.

This can be done, however, only through the co-operation of every member of the Society, who must first realize the peculiar and special obligation which now rests upon him. The underlying principle of this obligation is that each of us must participate in the sacrifices made necessary by the war. Any absolutely equal distribution of sacrifices is of course impossible but we may help to approach it.

The contribution of money for which your committee now asks, is but a small offset to that which is given by our fellow members in service.

You will observe from the resolution, how much money you are expected to contribute. For every \$1,000.00 of your total annual income, a monthly payment of \$2.00 to \$7.00, is to be made as long as the war continues, and as long as you are not in the service of the Government. This money will be safeguarded under bonds, and the funds will be used only in the fairest and most impartial way for the relief of the members of the Society who are in service and their dependent families.

The Detroit Trust Company will hold and invest all funds, and will disburse them only on written vouchers from the Patriotic Committee.

We recognize that the contribution of the money for which your committee asks, is only a moral



# The Journal

OF THE

## Michigan State Medical Society

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### *Original Articles*

#### HOOK WORM DISEASE—ETIOLOGY, STATUS, TREATMENT. RECENT EXPERIENCES WITH PATIENTS IN THE MOUNTAINS OF EASTERN KENTUCKY. AN ABSTRACT.

BLANCH N. EPLER, M.D.  
KALAMAZOO, MICH.

There is present a real menace to the American troops in this country and abroad from hook worm infection. For there is an intensity and wide range of this infection in this country; a congregating of troops, many infected, into the Southern States, the home of this disease, and an opening up of the new and favorable factor for disseminating the disease in the moist trench life in Europe. The coming of the War is bringing to the front hitherto neglected health problems and one of these for which we deserve censure is that of hook worm.

At present there is required no examination for the infection among the recruits. Known of for three centuries, hook worm was described two centuries ago and is of wide prevalence in Europe, Asia, South America, West Indies, Panama, Mexico, Philippines and elsewhere. It has been looked for and curtailed in Europe for fifty years and its seeming absence in this country was taken for granted. However it has existed in this country for years; it is the most important cause of disease among the 20,000,000 of Southern people; it is found in 20 to 50 per cent of California miners; it is found in a large percentage of the Indian and Chinese coolies on the Pacific coast, 90 per cent in some cases, and also prevails among the miners in other sections of this country.

Hook worm grips 90 per cent. of the people in some of the isolated mountain regions in Appalachian America where there are some 5,000,000 to 6,000,000 people; while among the

20,000,000 of Southern people it affects 80 per cent of the laboring class of the whites and negroes and 15 to 20 per cent of the university students. It prevails in Belgium, Prussia, the Rhine Country, Cornwall, England, Italy. Some 10,000 miners in the Liege district alone are infected while in the Loire Basin 5 per cent of the French miners had the disease before the war and in some of the mines 75 per cent of the miners were infected.

Kentucky has offered more volunteers for the war than any other state. The mountain men of Eastern Kentucky have turned out so gloriously for the present war that in one mountain county there were practically no men left to draft. Yet this is one of the hot beds of this disease.

The problem of hook worm in the mountains cannot be met irrespective of the type of people. These Eastern Kentucky mountain men are the remnant of the ancestry of Farragut, Lincoln, Boone and are the pure American stock. They are loyal, staunch, patriotic and intelligent, but uneducated. They are living in the customs of two hundred years ago. It was these mountain people who turned the British back east over the mountains, never to return, and in the Civil War made an impregnable obstacle to the Confederates coming north, thus saving Kentucky to the Union. At that time old men and young boys presented themselves from these mountain counties for the war—all turned out.

It is a fascinating history, that of this quick-witted, independent loyal class of real Americans of Scotch-Irish ancestry, who are living the frontier life of the 18th century in one of the most beautiful mountain districts of the United States. In Eastern Kentucky alone, in an area of 10,000 square miles, there are some 100,000 people. They travel by horseback or walk, while the women are rooted to their homes as firmly as are the trees. Their life and customs, at our very doors of civilization, are almost unknown and not appreciated and are neglected. This people, though of vigor-

ous Anglo-Saxon stock are not ruddy. They are tall, lank, stooped, sensitive, most gracious and unembarrassed and with the repose of the hills, but they have been passed by in these mountain fastnesses and hook worm and trachoma have been allowed to make havoc with their bodies.

Those infected are below par and are more susceptible to other diseases. There is no systematic control or attempt at eradication of the disease in this vast mountain region, nor of a large part of the territory of the Southern States, the home of the hook worm.

This disease surpasses others in its easy and rapid extermination medically, though for a long time it will be difficult to prevent it. The United States survey made through the control of the various states and aided by the Rockefeller Commission has obtained the status of the disease. Our knowledge of the life history of the parasite is complete, the treatment is specific, simple and so markedly effective that it seems magic.

Though in 1902 and since Dr. C. W. Stiles made evident that there was an endemic of hook worm in the United States the matter was grossly neglected and today it is evident, to one conversant with the range and intensity of the disease, that an extended research work is needed. In 1909 in an examination of 105 recruits of the Southern States, 94 showed the infection. The proportion today would probably be similar.

The negro, who is largely immune, is a carrier and constitutes about one-half the population in many of the Southern cities and more in the rural districts. Increased interest and effort toward the disease is called for because of the danger of imminent spreading among the recruits.

Patients, infected for some time with hook worm, become inert, anemic, stupid, and of a tuberculous aspect. If long continued they become of a greenish hue, or a chalky pallor, show fish eyes and other characteristics. In some of my cases the edema, the chalky like anemia, and the dwarfed appearance, were characteristics peculiar to hook worm.

I found ulcers, especially of the extremity, resistant to all local treatment until specific treatment was given the patient for hook worm. Many of these cases, even in 16 year old children, had been treated by charlatans for cancer; there being no physicians in these mountains.

"Risins" or innumerable and continuous boils were very prevalent, especially in the summer time, they, too, responding to local treatment,

after hook worm treatment. Secondary infections are very prevalent. The treatment for these cases is so simple and so rapid to a cure, except in the cases of long standing, that it seems inexcusably deplorable not to eradicate the disease.

The mode of infection is direct by larvae through the skin, mostly through the feet, and by water and uncooked fruits and vegetables introduced through the mouth.

Ignorance of the status of the disease by the medical profession up to about five years ago is striking. Even in Osler's Practice of 1907 there is advocated the use of castor oil in the treatment of the disease. We know at present that oil and alcohol are positively contra-indicated at the time of treatment, as they produce serious results.

Hook worm disease, ankylostomiasis uncinariasis, or miners anemia, is caused by the worm ankylostoma duodenale of the old world and neeator Americana or uncinaria Americana of the new world. The female lays eggs in the intestine of the host, and some 4,000,000 in twenty-four hours may be expelled. The eggs for hatching need moisture, shade and a mixture of feces with the sand or other soil. The number of worms in the host are usually from 1,000 to 4,000. The larvae feed on the expelled feces and undergo four moults to full development.

After the second moulting stage in about ten days, the larvae are infectious, capable of living months in moist places and of crawling into cracks and up moist boards. At this state they penetrate the unbroken skin and tissue of the host, produce ground itch, enter the blood stream and are carried to the right heart and lungs. The latter they penetrate to the bronchi. Sometimes they produce definite lung symptoms. From the bronchi they get into the mouth and alimentary tracts and in about five days again moult in the intestine while in another five days there occurs the last skin shedding. In six weeks they are fully developed, sucking the mucous membrane and the submucosa of blood and laying their eggs.

The diagnosis may be made by finding the worms in gross examination in the washings of the excreta, or finding the ova by microscopic examination.

Water and uncooked food frequently convey the larvae directly to the mouth. In these localities and throughout the South where hook worm is most prevalent, latrines are unknown



or infrequent and the soil is everywhere contaminated. The people are easily infected as the common habit is to go barefoot.

I found among my cases enlarged liver and spleen, effusions and affected hearts. The blood picture varied in hemoglobin according to the stage of the disease, usually below 50 per cent. In an older case leucocytosis and eosinophilia occurred as a rule. These patients, as before mentioned, were most prone to recurring staphylococcus infection, showing as numerous boils or even more severe infections. Nervous and stomach symptoms in children were frequent, as well as in adults. In a large number of examined children from 6 to 15 years of age, with one exception I found every child infected, not only with hook worm, but with two or more kinds of stomach and intestinal worms, the trichuria trichura, taenia nana or dwarf tape worm, ascaris lumbricoides.

These were usually gotten rid of with the hook worm treatment.

Since this experience I find that looking for some of these worms, not hook worm, in my cases among children in this section of the country, those in rural and urban districts are infected rather frequently, though it has been taken for granted that this is not so.

The treatment of hook worm is two fold. First prophylactic, second specific. The first presents a difficult problem and will require the sanitary co-operation of the State and Federal Government together with the work of those interested in special research. So far the only Government work is the survey work previously referred to. This will require two factors in the mountain work. 1. Co-operation and confidence by personal effort among the mountain people. 2. State law and backing. Foremost in the preventive work is the installing of latrines and in caring for my patients I felt it almost useless unless I could influence the mountain man to implant a simple latrine at his cabin. However, it was with a feeling of pride and medical satisfaction that I used to watch those stooped, sallow men go down the steep mountain side with a small Government-planned latrine over his shoulder, or watch the careful planting of it on the steep mountain side not far from the two-roomed cabin, and have the mother, whose confidence I had obtained, tell me that "She was aimin'" to make the six children always visit it.

The removal of soil pollution is the problem. I have travelled miles and miles in a day by

road outside this mountain district, through some of the southern country and have seldom seen a latrine outside the small town.

This disease is a low land as well as a mountain problem. The specific treatment is thymol: beta naphthol in intractable cases or chemopodium.

Those of the United States Government and Rockefeller Research who have done the intensive work prefer thymol. My medical treatment was thymol; the dose given according to age in two or three installments. Neither oil nor alcohol can be used during the treatment, as the drug is soluble in each and is then absorbed with serious consequences. The best results seem to follow a mild diet the day before with no fats, epsom salts at night and no food until the day after treatment.

The first dose is given about 6 a. m., repeated at intervals of an hour, with only a small amount of water to avoid toxic absorption. At one hour after the last dose there is given a second dose of salts. Better results are obtained if the patient remains in bed. The treatment, followed by iron and other tonic acts like magic in the recuperating of the patient. A second treatment is given in from ten days to three weeks, and sometimes a third if indicated. The well being of the patient and the gratitude is always made manifest.

The Kentucky Board of Health is keenly alive to the situation in their own state and are most active, though curtailed in their work.

The problem of hook worm is a great one, the economic loss enormous, and the ravages of the disease important; it has the entire South for its territory and is in dire need of solution now, with the new opportunity for the spreading of the disease.

Trachoma with its thousands of pitiful victims of blindness and suffering in Appalachian America, there being 33,000 cases in the eastern part of Kentucky alone, and every county in Kentucky infected, while it cannot so insidiously affect the recruits for the war service as hook worm, requires the same consideration. Much of the pioneer work has been done in Kentucky by J. A. Stucky, M.D. In startling contrast to the effort made in New York to debar the few cases of trachoma among the immigrants presented for entrance, is the neglect of this disease among the millions of people in the Appalachian Mountains and among the Indians.

## ON TWO BATTLE FRONTS.

J. D. DUNLOP, M.D., C.M.

ALPENA, MICH.

"Man's inhumanity to man  
Makes countless thousands mourn."

A poet of the people sang those words more than a century ago; and, after a hundred years of added culture, added civilization, and added appeals to the finer instincts and feelings of all the peoples of Christendom, the pity is that today some other poet could truthfully sing the same song and with little fear of exaggeration use the words "countless millions" instead of "countless thousands."

Great and mighty nations are tearing each other to bleeding fragments. Proud principalities with their ancient traditions, holy memories, and wonderful works of art, are razed to the ground and shattered to atoms; their human members, whether suckling babe, mother, maiden, youth, or man, made food for gas or gun, bayonet or shell. Even the hungry maws of ice-gripped oceans are made to swallow multitudes of innocent, helpless mortals.

The greatest vaults and treasures of the world are being drained to the bottom that men—millions of men—may be trained in all the modern refinements, the modern niceties, the unspeakable savagery of scientific human butchery. Vast fields that were a little while ago scenes of pastoral beauty, plenty, quiet, and contentment are now blood-sodden plains, flecked with human bones, or great charnel pits, oozing with slimy filth, redolent with the stench of rotting men. Children are dying at the breasts of their starving widowed mothers. Girls of tender age are screaming for food and help that cannot come to them, or, crazed by woe and want, are throwing themselves into the arms of lecherous men, made mad and brutal by the din and roar of belching guns, the blood, the groans, the shrieks, and all the hideous madness of this most awful war of all the ages. Grinning human skulls in staggering numbers are sending out to the world the reflection of a lust for power and the wicked avarice, the cold, calculating inhumanity of men. Here and there in and among these man-made hells, almost innumerable, the men and women of *our* calling stand out in bold relief. Fearless of all that death can do they die if need be; but while they live they laugh and mock and fight their foes, the only enemies they know or recognize, Suffering and Death. They yield to no man or set of men the badge of bravery or valor. Gal-

lantry means to them the soothing of pangs and pains, the saving of lives. It matters not to them the coat the soldier wears. Is he suffering? Can he be helped? are the only questions asked. The place may be on one of Flanders' bloody fields, in the trenches or behind the German lines. It may be in the Italian Alps or on the burning plains or miasmatic swamps of India, up the Dardenelles or on the frozen seas. It matters not when or where, our men, and this regardless of their nationality or creed, are always on the spot fighting with *their* allies, Mercy and Hope. Awful forces of destruction are hurled against them on every hand, dropped from the heavens, shot from under the waters, belched from a million hells all fed by billions of money, and though in fearful minority, they work on unwaveringly all through the bloody days, all through the long, dreary and sleepless nights. The moan of the dying, the pitiful cries for help, even the curses of some shell-torn thing that was once a man, but now a mangled mass, who with his last breath is screaming for revenge, appeal to them, and true to their calling in the midst of dangers and horrors unknown in all history, they risk their lives and comfort whom they can. They "do their bit." But there is a glamour to all of this, a deceptive something, a mesmeric overpowering pull, a glare in the world's eyes that seems to make equally great things quite insignificant to a very large proportion of our people.

In this almost quiet land, but slightly shaken yet by the horrors of the old world cataclysms, *our* men here, singly and in organized groups, are straining every nerve to save humanity from sufferings and deprivations infinitely worse than those of war because more lasting, and lacking even a shadow of excuse—sufferings not so glaringly in the spotlight, but still beyond computation, and surely followed by more, then more and more untimely, lingering deaths—deaths that leave behind them scores of other victims scattering the awful scourge, tearing from mothers their little ones, robbing honest families of their natural support, breaking young hearts bound together by love, or blasting robust youth with a withering blight. What *our* men ask to carry on this work of peace is insignificant while the emissaries of destruction are voted billions. Surely this mighty work of mercy should not be ignored, but allotted at least a cheerful pittance, so that the unselfish aims of earnest, loyal men and women could not be frustrated. The powers that try to save



too often are driven to beg and meet rebuffs. The roar of cannons deafen; the glare of myriad bursting shells blinds and stupifies; the blistering heat of battle, charged with the smell of blood, is carried to the cities, hamlets, homes, and hearts of all the people, and the still small voice of civic needs is frequently neglected, stultified, put aside, forgotten. But frenzy must not be allowed to take the place of calm deliberation, anger, revenge, and bitterness the place of sober thought, charity, mercy, humanity and love. Death in its habiliments of war, on earth, in air, on seas, and under seas, is, for the nonce, a novel thing. Its brutal blare has given it the stage. But this same Death that we have with us now, and all the time, unclad in the panoply of war, deceptive, cruel, unabashed, keeps silently at work, and at present with innumerable cohorts is heading our way with great rapidity. Its poisoned fangs are seen in every gathering place in the nation to our north, in the quiet home, in church, in hall, in store, in mansion and hovel, in cradle and in bed, so it will shortly be here. There has been and should be still trained men and women at work in our state using their utmost effort to discover, to warn, and to educate, in an endeavor to save our citizens from the suffering that is already with us, and that the war will multiply a thousand fold, and from a death that has no glamour, a suffering fraught with misery and blighted anticipations, a death that in its torturing cruelty has few if any parallels.

A tuberculosis clinic may seem tame and unimportant when compared with those on battle fields and fighting ships. The blood and blare and din are absent, but there are anxious hearts and tears and smiles, regrets and joy all mingled there with a soul-stirring pathos that pleads for an answer, often born of a hopeless hope, a wish but half expected. When the evidence is all laid bare by expert hands even that flickering hope too often disappears and no news from any battle field goes deeper or more bitterly into the soul.

Let us look for a few minutes and see. It was a crisp morning in January. The wind was blowing cold and fresh from the northwest. The sun was struggling to rise over the housetops and doing its utmost to shine, but a great snow-laden cloud, sullen and angry, tumbled from somewhere, and letting fall myriads of crystal stars, soon put a glistening mantle over everything. Some straggling sparrows twitted angrily and betook themselves to shelter in the eaves of the courthouse on the hill. The swirl-

ing wind took on a more lively freshness and twisted the naked limbs of the maples that stood in rows on either side of ascending walks, then whistling merrily on, dashed the smothering snow into the faces of men, women and children coming from all directions and trudging up the stiff inclines. There was in every eye a look of subdued surprise. The uninitiated wondered why this was so, for had not every one of them seen the courthouse on the hill scores of times? There was not a walk or tree or withered flower-bed, scarcely a sparrow that was unfamiliar. The bite of the north wind was nothing unusual, and the threatening storm was little more than common-place. In the groups were bankers, lawyers, laborers, teachers, artisans, merchants, paupers and money-lenders. Many had left their homes slightly ashamed of themselves for being so "foolish," but an inner consciousness had kept at work ever since the tuberculosis survey had been announced. Solicitous warnings and advice of friends with the assurance that there would probably be nobody else there had finally induced them to come out. Now that the people, mostly friends and neighbors, were all face to face in a comfortably seated hall there was unfeigned anxiety on the part of some, but on the whole a sort of interested curiosity prevailed.

Seated in front of and facing this dubious company were three bright young women, clad alike, and each, as though assuming the responsibility of all, was digging with eager interest into the family history and present conditions of an applicant for examination and charting what she learned for future reference.

These preliminaries finished, the nurses led their charges singly to inner rooms and kindly assisted them in "stripping to the waist"; this completed they returned to the waiting-room to dig into the secrets of other lives. On this particular morning two men, a father and son, had gone through the ordeal and were shown into the examination-room. The latter "stripped for action" was placed on a stool. The father, a shrewd-looking business man, was nervously watching his boy and at the same time with keenest scrutiny eying the doctor who was seated in front of the lad. There was not a sound in the room save the fitful hissing of the radiator attempting to keep the tall, broad-shouldered, anemic, and markedly bony youth from freezing.

Finally the doctor said "Breathe deeply," and as the boy obeyed the kind command his comely face shone with intelligence. He knew an ex-

exceptional thing, how to breathe, and knew he knew it, but the father, twitching nervously, gazed at his raw-boned son in utter surprise. He had been so busy making money that he had not seen his only boy for a number of years. He had seen his face, of course, and his head, and his well-made clothes and shoes, and even his hands, but not the boy. Now he looked at him with a sickening fear, and the doctor's silence as he sat and looked made matters much more ominous. Finally the doctor passed his hands over the expanded chest front and sides, then looking at the older man remarked "Lath-ed, but not plastered."

So intensely interested in his son this little pleasantries escaped the father and he asked with gravest eagerness, "Is that incurable?"

The boy laughed at his father's question and unusual concern, then, speaking with affectionate assurance to the elder man showed the splendid mettle that was in him and how well worth while he was. A careful examination revealed no lesion, but a reading of the chart and numerous questions brought out an old, old story, the sequel of which is so often fatal—an over-grown lad of seventeen taking his final grade in high school, helping to keep a set of books in his father's mercantile establishment after hours, and selling goods on Saturdays to insure a private bank account, no special care as to his diet, no special interest taken as to anything until a little hanging back came in his work and the mother noticed a lagging appetite. Fortunate for the young man it was that the survey came just when it did. Minute instructions as to work and play and rest and air and food were given, and the father, grasping the doctor's hand warmly, said, "This has been a great surprise to me. I believed the thing largely a hoax, had been told it was, in fact. I can't thank you too much for the careful examination of my boy, also for your valuable advice. It shall be followed."

A nurse pushed in with another chart and a young man of twenty-four, six feet and an inch stood before the examining physician. "Sit down here," said the doctor, and viewing the young chap's everywhere bulging muscles, he exclaimed, "Well!" Then with a twinkle in his eye, "Are you Jess Willard or Sandow or some of those fellows?" The young man smiled faintly but failed to see the joke. After looking carefully over his teeth, mouth and throat the doctor said, "Let your arms fall loosely by your sides. Now lean slightly forward and breathe naturally." After a moment of close

scrutiny and light palpation the physician commanded, "Open your mouth a little." Then he percussed on either side of the base of the neck over the clavicles, up and down the anterior chest walls, right and left, comparing them carefully. When over the superior lobe of the right lung he palpated the muscles with still greater care, noting the difference in them and their fellows of the other side. Again he stopped over the uncertain area, made some measurements, percussed with some violence, then softly, leaned back in his chair, eyed the young man critically, from every angle, noted the frightened glint in his large brown eyes, gave an almost inaudible grunt of dissatisfaction and picked up his stethoscope. The boy's chart lay on a table at the doctor's elbow, but he had turned it upside down, preferring if possible, to get his findings from physical signs alone.

"Lean forward and let your arms and body hang loosely. Now breathe." This order was intelligently obeyed, and as the great muscular chest heaved to and fro, and the big, well-near perfect arms hung limp with their sledge-hammer fists clenched nervously, the youth looked a Hercules indeed. But there was a sadness in the picture, an ominous fearsomeness that seemed to indicate a tale untold.

The snow had ceased to fall outside and beat against the window-panes. A ray of sunshine that struggled to get in was rudely smothered by a surly lowering cloud. The radiator in the corner, that had been hissing out its warmth so grudgingly at first had "done its bit," warmed the room, and now was silent. Finally the doctor, after covering every inch of chest with his stethoscope, listening intently the while, said, "Count one-two slowly and softly till I tell you to stop."

Soon he threw the thing impatiently on the table, and leaning back took a long breath himself, rested for a moment, turned the young man around, went over the posterior chest with the utmost care. He seemed to expect to find something about the lower border of the right scapula, for he returned to that spot over and over again. At last he said, "Breathe fast and deeply three or four times. The last time, when your chest is empty, cough." The interpolation of the cough clinched the suspicions, for when he dropped the stethoscope on the table again he muttered, "That stirred up the latent rales. I believe the case is positive." He turned over the chart and read, "Temperature 100, pulse 100, losing weight, worked very hard all last year in a close shop with a man who



coughed a great deal and expectorated on the floor or any place he happened to be. Have not felt just right for the past three months and cough a good deal mornings. Have lost my job because I get so tired and weak that I cannot do the hard inside work I used to do."

The doctor turned around and saw the big fellow with his head bowed and resting on his hands. Every muscle was quivering and tears were dropping on the floor. In an instant he pulled himself together and said, "I've got it, Doctor, haven't I? I wouldn't care so much, but I've got a wife and two babies; one of them is only four weeks old, and I'm out of a job because I can't do the work."

The doctor looked at him pityingly and placing one hand on his shoulder replied, "My dear fellow, you are only one of thousands, but come here tomorrow morning sharp at nine o'clock, and in the meantime I will see what can be done about your case. Tell your whole family the facts. I will do my best for you."

A nurse came in with another chart, and in a moment the doctor was earnestly searching in some other chest for a greater enemy to mankind than was ever produced by all the wars invented by men or ever thought of by all the minions of hell.

Paradoxical perhaps, but another scene was the same though different. The same because the fight was against an identical enemy, different because locality, conditions and circumstances all were unlike. We go back a little and find ourselves in hazy autumn time. A blustering wind was blowing in from one of Michigan's inland seas, now snarling and choppy because that season of the year always brings with it angry oceans, frosty nights, flocking wild-birds, and those supposedly sure harbingers of death from consumption, softly falling leaves. Again there was a court-house; again there was a large comfortably-seated room, filled with anxious people. The audience was less heterogeneous than had been met in many other localities, for it was not a manufacturing place made up of elements from the different corners of the earth. Save for the subdued sounds made by the uniformed young women in front, as they assiduously asked questions, recorded histories, or led some individual off to be undressed for examination, there was a complete silence. A door opened and a neatly-dressed, earnest-looking man of past middle age came out, crossed the platform in front of the people and passed down one of the aisles; behind him came another man of middle age, slight in build, but the

embodiment of energy and determination. As the latter stepped from the platform he turned around and kindly held out his hand to assist a girl of seventeen down the steps. He looked affectionately at her for a moment, then turning again he snatched a handkerchief from his pocket and brushed his eyes. The slender girl grasped him by the hand, and though speaking in an undertone, was heard to say, "Never mind, Dad, I'm not afraid, if they did say I was positive. Our doctor hasn't said so, and he knows a lot more than they do. I'll be all right, you'll see if I won't."

There was an attempt at cheerfulness and bravado in those words, also a tone of conviction and a determination to make a fight to the death. The two reached "our doctor" at the outer door, and with a rather bitter smile the father asked, "Well, doctor, what do you think now?" "Their decision is not final by any means, John, but it's a starter in the right direction, and we'll leave nothing undone to prove its correctness or otherwise, then act accordingly." "A starter," said the man bitterly, "I lost that girl's mother with a lingering death that was called stomach trouble. I lost my other two children with what was called brain trouble, and now the last is doomed to die of—No, by God, she shan't—She'll go some place where she'll be put under proper conditions before it's again too late. She's going to have a chance for her life. If you can't come across yourself and find that place *I will*." And the three passed out, leaving behind a strong supposition that the life of an only child, a beautiful young life, would be saved. Subsequent facts have proven the correctness of the surmise.

In an examination-room a near tragedy was being enacted. Two pretty children sat on separate stools. A survey nurse was fondling one of these and caressing the wind-tossed locks of hair that fell over the shapely little shoulders. The child was watching with keen interest the startled look in her brother's face as the examining physician percussed his tiny plump chest, then placed him under the tattling stethoscope. An experienced nurse, who had carefully scanned the chart of these two little ones, was in under-breath conversation with the girl-mother of the children. The latter was saying "But I don't care in the least about myself. So long as I am sure my babies are safe I know I shall be all right." But the importunities of the nurse won, and soon the attractive-featured, bronze-haired girl of twenty-seven was undergoing an examination that was to make and

did make changes in her life, to be sure, but in all human probability prevent the real tragedy of leaving two little children without the love and care of an unselfish and beautiful mother, one endowed with the character, graces and other real qualities that go to make that word mother dip down so deeply into the human heart.

So, one by one of the waiting people was taken in charge, and, as near as modern science and the accumulated experiences of the past have taught our profession, every effort was made to discover the presence or absence, the approach or the ravages of our arch-enemy, the Tubercle Bacillus, and each applicant was given in a nutshell the combined teachings of the great medical men and the great research institutions of our time. True, there were no impossible things done or attempted. There were no immediate laboratory tests made, nor X-ray machines used, for such, under the circumstances, were impracticable and, in fact, quite unnecessary, but when indicated the individuals were advised or referred. Instructions of the utmost value other than professional were given in many ways, and the eyes of the masses—yes, and the eyes of quite a proportion of our profession (some of which were stuck pretty tight) were wide opened, not only to existing and impending miseries, dangers, and deaths, but also to the *deep responsibilities that really as a profession rest upon every one of us.*

This work should be continued, perhaps in some other way, perhaps on broader or different lines, but even as it was conducted the far-reaching good done is absolutely inestimable. We always have those among us who "can do things better" but that doesn't matter. There never was a time in history when such a work was of as grave import as now. Hundreds—yes thousands—of young men will be rejected as tuberculous very shortly, and scores more break down when subjected to the exigencies and strain of real war, because the bacilli, though hiding, and unfindable, were nevertheless there somewhere awaiting an opportunity to attack. Again, there is an associate disease, almost a twin-sister, at least a dangerous ally, that is stalking silently with pulmonary phthisis and is worthy of *mighty careful* watching by expert eyes—Syphilis, always with us, and always the same filthy death-dealing monster, will be multiplied, because of the war, into most alarming proportions. *Our* men, I know, will meet and conquer these two of mankind's most

insidious, though silent, enemies, if but given an opportunity.

Let us ask for that opportunity and if not heeded then demand it.

### FOCAL INFECTION.\*

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It has taken medicine many centuries to attain its present altitude, and judging from the many problems that are still deeply veiled, we are as yet far from the summit; but we are thankful for as much positive knowledge as we now possess.

With the dawn of the germ theory as the etiological factor in disease a great impetus was given in the field of medical research. Leading up to this theory was the work of Semmilweis of Vienna, with a theory that childbed fever was caused by students with unclean hands from the dissecting room contaminating the genitalia of women in labor. Next followed Klebs, with his microsporum septicum as the cause of sepsis. Then the brilliant work of Pasteur.

From that time on great strides have been made in searching out the cause of disease and obtaining definite knowledge establishing the bacterial origin of many maladies. However, it has been reserved for the last decade to seek out the common habitation of some of these organisms and the end results of such a residence.

Those of us who have been in practice a few years know the difficulties we encountered in diseases like arthritis, rheumatism, endocarditis, etc. The solution of the cause of these diseases is one of the greatest triumphs in modern medicine. It is said by a man in Chicago who has a large industrial practice that a careful search showed focal infection to be the cause of illness in 30 per cent of all his cases. I do not believe from our own experience that this is too high an estimate.

It is not the cure but the prophylaxis that claims our attention, for this shows us the way of preventing many of these troubles. Bacteriologists like Rosenow, Theobald Smith and many others, have demonstrated without any reasonable doubt that infection in the tonsils, teeth and sinuses may not end there but can produce a secondary involvement, either through the lymphatic system or the blood

\*Read before the Calhoun County Medical Society, Sept., 1917.



stream, in some remote part of the body. This we do not question, for a careful history and our own observations have made it clear to us.

Nearly all diseases have a focus of infection, but when we speak of focal infections we have special reference to the tonsils, sinuses, teeth and often the genito-urinary tract. Here germs take up a residence and may live for years, producing their ill effect on the human organism. A tonsil may have imbedded very deeply within it an infected area from which it is impossible to express by pressure on the tonsil any pus, yet the swelling of the cervical glands may show it. I have often thought of what a great benefactor the lymph node is to the human organism by inhibiting the free passage of organisms into the general circulation.

Without such nodes it is quite probable that tubercular meningitis would be a much more common disease in children, and the common throat infections lead to far more serious results.

An acute infection of the tonsils may be followed by an acute endocarditis, acute rheumatism or acute nephritis, or the infection may subside without producing any of these troubles and leave only chronically infected crypts, from which pus may be expressed. It is claimed by Rosenow that this latent infection may produce gastric ulcer and acute appendicitis or an acute cholecystitis, and his carefully controlled experiments on hundreds of animals leave little doubt as to the truth of his conclusions.

The teeth we know are often at fault. Frequently an abrasion of the gum from traumatism, followed by pyogenic infection, and a later involvement of the peridental membrane, may form a potent source of general infection. Then there is the alveolar abscess, with apical involvement not apparent from the mouth, from which may come the chronic arthritis, nephritis, neuritis or other clinical developments more easily recognized.

Any one of the sinuses of the head may contain enough infection to produce any of these diseases. In fact, wherever there is a pocket of pus there is always danger of secondary involvement. Gall bladder infection, pyelitis, infected prostate, seminal vesicles, Fallopian tubes, infected hemorrhoids, any one of these may produce serious constitutional results from secondary infections.

Once we recognize the importance of such foci of infection to the body as a whole in

disease and the deleterious effect upon the natural resistance of the individual, we are brought face to face with many concrete problems concerning the mode of entrance of such infection, the characteristics and peculiarities of the organisms present, and later the means to be employed in eliminating such infection in the most satisfactory way.

Researches of some of our most able bacteriologists have shown us that a given organism may not at all times act in the same way in the production of disease and may even undergo certain degrees of transmutation in various ways. Frequently the abode of such an organism in different tissues seems to give to it special selective affinity for those types of tissue. This has apparently been demonstrated by the culturing of streptococci on a kidney tissue medium, with the later evident special affinity for the kidney upon injection into the veins of experimental animals.

Some organisms at times seem almost human in their sensitiveness to environment and in their mode of growth, with consequent influence upon the host. In reviewing some of these phases of focal infection relating to constitutional effects I have wondered if perhaps we could not obtain better results in some of our cases which present indications for the use of autogenous vaccines if in culturing organisms obtained we might use in the culture media tissue approximating as closely as possible that upon which the organism is expected to act.

For example, might it not be well to use a small piece of the lung of a guinea pig or rabbit, properly prepared in the culture media used in growing the mixed cultures of pneumococci, staphylococci, etc., frequently obtained in chronic bronchial infections, or possibly to favor some of anaerobes often found in asthma with such media?

There is an open field of research along such lines which is not alone for the laboratory man, but offers attractive food for thought for the clinician as he turns over carefully in his mind the details of the cases in his routine work.

There are many diseases of which we have not yet determined the etiological factors. Without doubt the application of our ideas of focal infection to broader fields may help us in working out some of these unknown factors, although we must be conservative and careful not to see too much in the light of recent brilliant experiments along these lines.

Ochsner and Purcey have carefully worked

on the relation of focal infection to pernicious anemia, especially emphasizing the associated conditions of gall bladder, appendix and spleen; while no definite conclusions can be drawn in this particular instance at present and much discussion has been aroused by the work, such endeavors give us food for thought.

In a like manner, may we not possibly some day come to understand more clearly the changes taking place in an interstitial nephritis, with the associated hyper-arterial tension and high blood pressure. In the minds of some observers the presence in the body of a chronic infection over a long period of time lowers resistance and has its influence in initiating changes in the spleen and pancreas and possibly may also involve some the unusual activities of the glands of internal secretion.

Some of us have seen cases of diabetes improve markedly and show better results upon the recognized Allen starvation and careful dietary management after the removal of badly infected teeth.

Thus let us all recognize the importance of infected foci in the body to constitutional disease. Let us use every means at our command in examining our patients to rid them of such foci and not rest content when we have found one source of infection but make sure that we have removed all sources which we are able to recover. Frequently we know that a dentist may tell us that he can see nothing wrong with a tooth, and we ourselves—less experienced in examining the teeth and gums—may easily pass them by superficially; but in many of such instances where there is the slightest indication, X-ray films of the teeth show us apical abscesses or peridental infection which we would not find in other ways.

Routine examination of the sinuses of the head and careful attention to the pelvis in both male and female may often give us the right key to the solution of a case and the opportunity to be of real service to our patients in helping them to eliminate the source of their trouble and the consequent generalized infection. A careful history, a thorough physical examination and the use of all special means at our command—these constitute our equipment; let us use them.

## TALIPES EQUINO VARUS.\*

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In this paper I shall present for your consideration a few points in the surgical treatment of congenital Talipes Equino Varus—a condition not very rare, and one that comes to a man in the practice of medicine at least a few times during his professional career.

This deformity more often affects both feet than one, and is much more common in male than in female children. About 10 per cent of the cases of congenital club foot are associated with other malformations such as spina bifida, lateral curvature of the spine, deformity of the pelvis, meningocele, hydrocephalus, congenital dislocation of the hips, and malformation of the bones of the legs, such as absence of the tibia. In the other 90 per cent the pathology is confined to the foot.

As to etiology there is little to be said. Suffice it to say that in the vast majority of instances in this deformity like other congenital defects, there is little definitely known as to the cause. There is not time here to go into the theories which have been formulated.

The pathology met with in club foot is very interesting, as it involves both the soft parts and the bones. The foot is sharply supinated by the shortened tibialis anticus, so that the sole of the foot looks inward, and the patient walks on the outer border of his foot or more often on its dorsum. The foot is markedly bent on itself, so that the anterior part of his foot is in sharp adduction by contraction of the tibialis posticus. The flexor tendons of the toes are short, and attempts to straighten the foot, bring the toes into sharp flexion. This point should not be overlooked at the time of operation. The plantar fascia is always too short, leaving the sole of the foot in the position of cavus. The gastrocnemius and soleus muscles are shortened which elevates the heel and gives the extended position to the foot.

Accompanying these changes of position of the soft parts, the shape and relation of the bones of the foot are altered from normal. The astragalus bone, taking a leading part in the formation of the ankle joint, suffers the greatest amount of change. It is rotated forward upon a transverse horizontal axis, and its head points downward and inward. Its neck is elongated; this brings the posterior part of its articular

\*Read at Annual Meeting Upper Peninsula Medical Society, August, 1917.



surface in contact with the tibia and fibula, and the scaphoid rests only on the inner part of its anterior articular surface. In extreme cases the scaphoid may be turned so far inward as to rest on the inner maleolus of the tibia.

The os calcis also presents changes in shape and position. The bone is smaller than normal. Its posterior portion, or heel, is short and poorly developed. Its anterior part is, like the astragalus, bent inward and downward.

The scaphoid, cuboid, and metatarsal bones, in turn, are changed to fit in this marked downward and inward development of the foot.

All the soft structures upon the sole and inner border of the foot are shortened. The skin, subcutaneous tissue, fascia, tendons and ligaments alike are affected. If the patient is old enough to walk, there will be found a heavy callose or bursa caused by the pressure in walking.

The symptoms of club foot are: Interference in walking due to the inward projection of the foot. The patient has a straddling, stiff, and glumsy gait. The longer the condition remains untreated, the more extreme the deformity becomes, and greater the changes in the soft parts and bones, and in the relation of bones entering into articulations.

There is no pain connected with the malady. The patient learns to walk in due time, and runs and plays with as much enjoyment as a normal child.

The diagnosis of this condition is easy and made upon sight. There is no other condition that simulates it in pathology. The history of the child being born with the deformity completes the diagnosis. The acquired forms are chiefly met with as after effects of anteriopoleo myelitis, in which cases paralysis of groups of muscles is apparent.

There is a great deal to be said about the treatment of club foot, especially as regards technic, and the age of the child when the operation is best performed.

In general it is conceded that the best time to operate upon a congenital club foot is after the child has begun to walk. The chief difficulty in this procedure, however, is encountered with the parents, who feel that something should be done as soon as possible. A great deal may be done when the child is very young toward making the operation easy, by massage and daily correction of the deformity by the parents or nurse. This is done by grasping the ankle in one hand, with the other gently stretching the

fascia and tendons back toward the normal position. This keeps the tissues soft and pliable and leaves less to accomplish at the time of the operation.

There is no contraindication to performing an operation a few months after birth, but good results are much harder to obtain. First, the tissues are soft and tender and there is a greater tendency to pressure sores from the cast. Secondly: the foot is too small to easily be held in position. Last, and by no means least, you are deprived of a very valuable help, that of the patient walking on the foot in the corrected position. This is one of the most powerful factors in the correction of the deformity.

At the time of operation, the following technic is recommended: After the patient is anesthetized, paint the foot with half strength tincture of iodine and apply sterile linen.

With one hand grasp the ankle firmly, with the other hand forcibly stretch the shortened tendons and fascia back to normal. This consumes considerable time and energy.

Attention should first be given to the inversion, adduction and supination of the foot. A great help in the stretching of these parts is a triangular shaped block of wood or metal over which the foot is worked.

If by these manipulations the foot cannot easily be brought to an over corrected position, the shortened tendons should be severed, and the manipulations continued until the foot, with little pressure, can be brought to a dorso flexed and everted position.

The chief point in severing the tendons is that the tendo achilles should not be cut first, but last, as it serves a very important function in holding the foot while the adduction and varus are being overcome. If the tendo achilles is cut before this is accomplished, the task at once becomes much more difficult.

Then the logical order for doing the tendonotomies is first, through a puncture wound in the skin, with a blunt tendonatome divide the tibialis anticus and posticus tendons near their insertion. If the plantar fascia is too short it may be divided subcutaneously through a puncture wound at the inner aspect of the sole of the foot. If the toes are rigidly flexed when the foot is in the corrected position the flexor tendons should be cut subcutaneously through puncture wounds made at points over the metatarso-phalangeal joints. After all the other tendons are severed, the tendo achilles may similarly be cut.

The puncture wounds are sealed with calodion and a plaster of paris cast applied with the foot flexed a little more than a right angle and somewhat in eversion.

The aim of the plaster cast should not be to force the foot into position, though moderate pressure may be exerted if the foot is sufficiently padded at the site of pressure. Its purpose should be to hold the foot in place after it is sufficiently manipulated.

In applying the cast, stockenette is applied next to the skin, as other material is apt to wrinkle or wad, causing pressure necrosis.

When the cast is nearly completed, the ends of the stockenette may be turned back and secured with a few turns of the plaster bandage giving a neat appearance to the cast. The stockenette should be covered with about two layers of sheet wadding bandage, wound around the foot and leg extending nearly to the knee. A thin piece of felt may be laid over the bony prominences or points of pressure. The sheet wadding and felt is then covered with a muslin bandage, being careful to wind the bandage in the direction of correction of the foot. It is well to end the bandage at the sole of the foot, and extend the uncut end up the outer side of the leg. By traction on this bandage an assistant can maintain eversion of the foot, while the plaster bandages are being applied.

In winding on the plaster bandages care should be taken to rub in the plaster after each turn of the bandage, as this gives added strength and durability to the cast.

The patient I have to show you is a boy three years of age. He came into my office about fifteen months ago, with a congenital club foot deformity of his left foot; he had had two operations with little success. The first at the age of four months, when the tendo achilles was cut. At the age of ten months the second operation was performed when the other tendons and planta-fascia were cut.

When first seen the patient had not learned to walk alone, but with aid, he walked on the dorsum of his foot, with his toes pointing toward the heel of the other foot. The tendo achilles had been cut while the foot was still rigidly bent inward on itself, and in the position of varus.

The patient was given an ether anesthetic

and the foot manipulated as described above and put into a plaster cast. The heel was very poorly developed, there being almost no prominence at that point. So before the plaster set, the cast was shaped as desired and considerable backward pressure on the foot was exerted, with counter pressure behind the ankle. This point was given attention each time the cast was changed, and you are able to see the result.

I operated upon the patient in March, 1916. The cast was changed in September and again last January. The last cast was removed about two weeks ago and this home made brace was applied.

You will note the merits of this brace; it is made of a band of steel, so arranged that when its upper end is strapped to the leg, the shoe is everted. The shoe has no heel, but a piece of leather is added to the outer part of the sole, to help maintain flexion and eversion of the foot.

While the patient now stands squarely on the sole of his foot, there is still a tendency to inversion and internal rotation of the foot. The patient will wear this brace until the tendency to varus is overcome. The internal rotation will gradually be overcome by education.

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#### ABSTRACT—RETAINED SECUNDINES—A STUDY OF ETIOLOGICAL FACTORS.\*

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This paper involves a study of the literature from 1878 to 1917 and of curettings or other material obtained from 474 routine gynecological cases in which were found 70 pathological sections of unresolved decidua chorion, or other fetal tissues. Representing approximately 17 per cent of cases in which pregnancy was almost wholly unsuspected.

Ten per cent. of all pregnancies end in abortion, according to popular estimates. According to many statistics 72 per cent. of abortions are incomplete and of these 45 per cent. become infected, whereas infection follows in 78 per cent. where criminal procedures are used. Criminal measures are the greatest direct and indirect causes of abortion, 55 per cent. to 65 per cent. Syphilis and endometritis are also prominent factors. A first abortion often leads to subsequent miscarriages and this explains 23.2 of all cases. The mortality is given as 3.9 per cent., or ten times as great as in full term deliveries.

\*Read at the 26th annual meeting of the American Association of Obstetricians and Gynecologists at Newark, New Jersey.



In spite of the thorough review of the literature in English, French and German for the period 1878 to 1917, statistical values are scarce. This is due to the secrecy observed in regard to abortion, both criminal and otherwise. Furthermore many cases pass unrecognized, such as cases of retarded menstruation followed by profuse hemorrhage.

Incomplete abortion results from difficult separation of the embryonal and maternal parts or from inadequate expulsive power. A portion which has undergone degeneration or necrobiosis may become separated alone and be expelled or retained by a rigid cervix. Or as is usually the case in criminal abortion especially after the first few weeks the fetus may be expelled leaving the membranes adherent. Malpositions of the uterus may be instrumental in an early separation and in incomplete expulsion. Frequently monsters end in abortion also.

The preplacental stage ends in the third week but the placental tissues are not well developed until the sixth week, the trophoblastic cells up to this time providing nutrition by inhibition from the extra-vascular blood and lymph of the maternal tissues.

In the human placenta the union between the ovum and the maternal mucosa is very complete due to a gradual obliteration of the partition layers. This allows a free exchange of pabulum and excreta by the direct contact of maternal blood with chorionic villi. The embryonic tissues play a part in the digestion and assimilation of the food supplied and bear a resemblance to intestinal villi.

In recent studies the ovum is considered capable

of enzymic production in its trophodermic cells by which it digests the adjacent uterine mucosa, thus forming a cavity for its implantation. The placenta is formed to control this dissolution and protect the maternal organism. But up to the end of the fourth month of gestation the katabolism predominates.

The uterine stroma is a highly labile protoplasm very susceptible to nutritional influences. Due to its colloid content it avidly absorbs fluids, thereby effecting the changes incident to pregnancy, menstruation or choric-epithelioma. This process is most marked near the chorionic villi and predisposes to hemorrhage which is easily understood from a study of the nature of the bloodvessels of the uterine mucosa. In the pregnant state these vessels have practically no walls but are really blood spaces or channels through the stroma.

And here lies the crux of the entire question of abortion; and whether it is complete or incomplete depends upon the nature of the intercepting pathological factors.

Of these factors criminal measures comprise over 50 per cent. Syphilis, endometritis, metritis, malposition and inadequate placental sites, all may cause circulatory disturbances leading to partial separation, then hemorrhage, death of the fetus and incomplete abortion with retained secundines.

The principles involved from whatever cause may ultimately have the same end result of determining improper enzymic production and interaction with resulting abnormal metabolism, death of the fetus and incomplete expulsion.

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## NEW AND NONOFFICIAL REMEDIES.

*Concentrated Solution Sodium Hypochlorite-Mulford.*—A 5 per cent, aqueous solution of sodium hypochlorite containing free chlorine equivalent to 0.2 to 1.0 per cent. of sodium hypochlorite. One volume is diluted with nine volumes of water and the amount of boric acid required (stated on the label) to render the solution neutral is added. This dilution is used in the irrigation method of treating infected wounds. The H. K. Mulford Company, Philadelphia, Pa. (*Jour. A.M.A.*, Sept. 1, 1917, p. 727).

*Calcreose.*—A mixture containing approximately equal weights of creosote and lime in chemical combination. It is stated that, when administered internally, calcreose has the same actions as creosote. It is claimed that it is not likely to produce gastric distress, nausea or vomiting. Calcreose is sold in the form of powder, as Solution Calcreose and as Calcreose Tablets, 4 grains. The Maltbie Chemical Co., Newark, N. J.

*Chlorinated Paraffin Oil-Dakin.*—Liquid petroleum, chlorinated at ordinary temperature. It is used as a diluent for solutions of dichloramine-T in chlorinated eucalyptol-Dakin. The Abbott Laboratories, Chicago.

*Thiocol-Rochs.*—Thiocol is the potassium salt of orthoguaiacol sulphonic acid, obtained by sulphonating guaiacol. Thiocol-Rochs acts as a sedative expectorant. It has the advantage over guaiacol in that it is comparatively tasteless, does not disturb digestion and is non-toxic. It is claimed to be useful in the treatment of diseases of the respiratory tract, incipient tuberculosis and certain diarrheas. Thiocol-Rochs is supplied in the form of a powder, as Syrup-Thiocol and as Thiocol-Rochs Tablets, 5 grains. The Hoffman-LaRoche Chemical Works, New York (*Jour. A.M.A.*, Sept. 15, 1917, p. 911.)

*Chlorinated Eucalyptol-Dakin.*—Eucalyptol chlorinated at ordinary temperature. It is used as a solvent for dichloramine-T. The Abbott Laboratories, Chicago.

# TRANSACTIONS

## OF THE

### Clinical Society of the University of Michigan

Stated Meeting, July 1, 1917

The President, CARL D. CAMP, M.D., in the Chair  
Reported by REUBEN PETERSON, M.D., Secretary

#### SUDDEN DEATH IN A CASE OF SYPHILITIC AORTITIS.

ALBERT C. FURSTENBERG, M.D.

(From the Clinic of Otolaryngology, University Hospital, Ann Arbor, Michigan).

The patient, Mrs. C., age 29, entered the University Hospital October 18th, 1916. She was assigned to the Department of Internal Medicine, where the following history was obtained: She came to the Hospital on account of shortness of breath and palpitation. In her family history she states that her grandfather and grandmother died suddenly of heart disease and that her mother and sister were both suffering at the present time from cardiac disease. Her personal history was of importance in that she had suffered twice from a severe attack of acute articular rheumatism, the first at the age of 17 and the second at 22. She had been married for seven years with two children living and well. Her first pregnancy terminated in a miscarriage at the end of the third month. Her second child was stillborn. Her present trouble began seven years ago at the age of 22, when she suffered from a severe attack of acute rheumatic fever, confining her to her bed for more than a month. Since this illness she has complained of intermittent attacks of dyspnea and palpitation. Such a seizure compelled her to remain in bed from December, 1915, to April 1st, 1916. Following this attack she enjoyed fairly good health until August, 1916, when she was again seized with palpitation and cardiac distress associated with edema of the feet and ankles. On many occasions the attacks of dyspnea coming on at night compelled her to sleep in a chair. Recently the shortness of breath on exertion had become a more troublesome feature. Since October 10th she had

precordial pain, radiating at times into the left arm.

The physical examination was as follows: Frame large, nutrition and musculature good. There was a visible systolic pulsation in the neck. The lungs were negative. Examination of the heart showed the apex beat localized in the fifth, left intercostal space. The mitral first sound was loud and snappy and preceded by a murmur heard only at the apex and not transmitted. A low-pitch, faint blowing, late systolic murmur was heard at the apex and faintly transmitted toward the axilla. In the tricuspid area a soft blowing, diastolic murmur was faintly heard. The second pulmonary sound was accentuated. The radial pulse was regular, forceful but poorly sustained. The tension seemed somewhat increased.

Examination of the urine and blood was negative. The Wassermann on the blood was also negative. The blood pressure on entrance was systolic 110, diastolic 60. Patient was referred to the Department of Roentgenology where a diagnosis from the orthodiagram of aortic insufficiency was made. From the findings in the Medical Clinic a diagnosis of aortic insufficiency was also made.

On October 18th the patient was referred to the Department of Otolaryngology with a question of a tonsillar infection. Here she gave a history similar to the one previously obtained in the Medical Department. She further stated that the cardiac distress was becoming more troublesome and that she often had bright flashes before the eyes and frequent sensations of fainting. She gave a history of repeated attacks of acute articular rheumatism each definitely preceded by tonsillitis and quinsy. Examination of the throat revealed submerged



hypertrophied tonsils with numerous large crypts and extremely septic. Examination further revealed a bilateral cervical adenitis. In view of the definite history of attacks of tonsillitis, followed by rheumatism and the septic nature of the tonsils, it was advised that the patient be transferred for tonsillectomy under cocaine anesthesia, providing the heart condition at present was not a contraindication. She remained on the Medical Ward twelve days prior to the operation under treatment with digitalis. Her temperature and pulse remained normal. She was not confined to her bed and her condition improved rapidly. She made daily visits to the Dental Clinic and at no time during her stay in the Hospital did she suffer from cardiac distress or dyspnea on exertion.

On October 26th she was transferred to the Department of Otolaryngology for operation as advised.

On the following morning the patient was brought to the operating room. She had been given morphine grains  $\frac{1}{8}$ , atropine grains  $\frac{1}{150}$ , hypodermatically one hour before. She complained of no unusual symptoms and showed no signs of fear or apprehension. The operation was performed with the patient in sitting posture. The right tonsil was infiltrated with one and one-half drams of  $\frac{1}{2}$  per cent cocaine hydrochloride, in a 1 to 10,000 adrenalin chloride solution. The right tonsil was promptly enucleated without incident and with practically no hemorrhage. The left tonsil was then infiltrated with about one and one-half drams of the same solution. The anterior and posterior pillars were freed and the tonsil dissected down to the base. Suddenly the patient became very pale and covered with a cold, clammy perspiration. The pallor was quickly replaced by a flush of cyanosis, rapidly spreading over the neck and face. The pupils became widely dilated, the muscles of the back and lower extremities became rigid, the radial pulse was imperceptible, and the patient fell forward and promptly succumbed. All means of resuscitation were of no avail. A stethoscope applied to the chest showed that cardiac action had ceased before the cessation of respiration.

Following is the autopsy protocol from the department of pathology:

Congenital syphilis. Diffuse interstitial myocarditis and aortitis. Syphilitic spleen. Aortic insufficiency, and relative insufficiency of mitral valve. Cardiac dilatation.

This case presents a number of interesting points. What are the possibilities? What was

the exciting cause of death? Can we say that it was a definite case of cocaine poisoning occurring in an individual with an idiosyncrasy for the drug, or is it a case of acute dilatation accompanying shock? Or might it be due to an anginal attack, or a breaking away of a vegetation on a valve which lodged in one of the cerebral arteries? To me it seems that the anesthetic had nothing to do with it. Knowing that cases of aortic insufficiency are characterized by accidents and surprises, and that sudden manifestations after long periods of latency especially characterizes the syphilitic type, I believe that it is reasonable to conclude that any trivial operation or any slight shock might have produced the same result.

#### DISCUSSION.

DR. HARRY B. SCHMIDT, Detroit: This case is very interesting to me because I just recently saw a case of sudden death after the use of cocaine. The patient had received a less than 1 per cent. cocaine solution injected into the urethra for cystoscopic examination and within five minutes he died from convulsions. The consensus of opinion of pharmacologists is that there is not an idiosyncrasy to cocaine. The sudden deaths are from the rapid absorption of the drug by means of the circulation. In Dr. Furstenberg's case, due to the dilatation of the pupils, I should think that that was a possibility that would have to be considered and it is something that cannot be helped.

I was surprised to hear that the diagnosis of mitral stenosis was made here and not a pure aortic insufficiency with an Austin-Flint murmur. That, I should think, should be considered the first thing. Of course, in all cases of aortic insufficiency lues should be considered.

DR. JAMES G. VAN ZWALUWENBURG: I had the privilege of examining this patient as Dr. Furstenberg has stated, and in going back over the record I think we could have excluded mitral stenosis absolutely on the shape, size and general characteristics of the heart. As a matter of fact it is the one striking situation in which the orthodiagraphic distinction between heart lesions is of most use. We can almost certainly distinguish between mitral stenosis and aortic regurgitation.

The doubtful etiology of lues I think is exceedingly interesting. As a matter of fact, the Wassermann was negative. There was adequate etiology for aortic regurgitation. How was one to suspect that this was a case of congenital lues in the absence of stigmata? As a matter of fact, lues needs to be considered as an etiologic factor in aortic regurgitation only in those who are older. It is a matter of statistics that the majority of cases seen in patients over forty are luetic. The others are mainly due to the tonsils. I cannot see how from the prognostic

point of view, any other course could have been pursued than to remove the tonsils, even though the lues had been determined beforehand. Possibly may be pardoned if I still have a lurking suspicion that the cardiac pathology was due to the tonsils rather than to the lues, although lues may have been present. But it does not seem possible to me that this is a true luetic aortitis.

## A CASE OF HYSTERICAL BLINDNESS.

CARL D. CAMP, M.D.

(From the Neurologic Clinic, University Hospital, Ann Arbor, Michigan).

The case which I have to report is one of hysterical blindness of long duration. Hysterical blindness is a condition which is rather rare; in fact, there are some writers upon the subject who are somewhat skeptical about its occurrence. For instance, Sachs, writing in 1899, says that he would "prefer not to accept the occurrence of complete hysterical amaurosis of a month or more duration until more convincing cases are brought forward." Dana says "hysterical amaurosis may last many weeks." Starr says that "cases have been reported to have been complete and bilateral." De Schweinitz says, "I have never examined a patient with hysterical amaurosis except as it occurs in a temporary way during the course of an attack, but some of the cases in the literature appear to me to be above suspicion." Kron divides the cases into those that are transitory, those of short duration and those of long duration. The longest duration of any cases on record is the case reported by Harlan of Philadelphia. His patient was a young man who was struck above the eye and became blind in that eye. He continued to have pain from time to time and was advised to have the eye enucleated. At the Wills Eye Hospital where he went to have the operation, it was found that the blindness was hysterical. There are four cases on record in which hysterical blindness has lasted from five to eight years; four cases where it has lasted about a year and a half; twelve cases lasted from one to eight months; nine cases from two to three weeks; and nineteen cases from one to five days. The cases where it has lasted five years or longer have all been unilateral.

The case that I have to present is that of a young woman, aged 19, who was admitted to the University Hospital on the 25th of May, 1917. She was first admitted to the Ophthalmologic Clinic where the diagnosis was suspected, and

was then transferred to this Clinic. Her family history was of no special importance. There was no history of blindness in the family. She had measles and chickenpox; no diphtheria, scarlet fever nor typhoid. She never was troubled with sore throat or headaches. Her menstruation was slightly irregular and began at eleven, before the present trouble began.

She said that when she was about eleven years of age she suddenly became partially blind while studying in school. She could not see to read. The following day she obtained glasses and then she could see as well as before. From then on her vision gradually failed, although she continued to go to school, and a doctor told her that the optic nerve was affected. At that time light hurt her eyes and she had to sit in a dark room. At fourteen she said she became totally blind, and since then has been unable to see and does not even have light perception. She had her tonsils and adenoids removed about three years ago and then entered the School for the Blind at Lansing, Michigan, where she has been ever since. In February of this year she had the grippe and following this general weakness, especially in the knees, and a numb, drawing sensation in the legs. At times the right leg seemed worse than the left. There is no difficulty in urination. The legs felt strained, "as though they were sore." She had had no sharp pains.

Upon examination on her admission to the Hospital it was noted that she was fairly well nourished, but undersized and somewhat infantile in appearance. There were no definitely enlarged glands. The forehead was prominent. There were marked stigmata of deviation. There seemed to be a dropping of both eyelids, especially when she was requested to look upwards. She did not, could not, or would not, look in any direction voluntarily. This was not, however, a paralysis of extraocular movements, since if her eyes were watched it would be seen that they would occasionally turn in complete excursion. The pupils apparently did not react to daylight. They occasionally moved, but the only change was dilatation when the patient had both eyes open. As she had had atrophine in her eyes, the day before, this observation is open to some question. The tongue protruded straight. There was no tremor of the tongue or lips. The teeth were sound. There was no atrophy nor deformity of the arms or hands. The finger nails were severely bitten and the hands had a decidedly infantile appearance. The biceps and triceps jerks were present, equal



and normal. The musculature of the legs was infantile in type. Knee and Achilles jerks were active and equal. There was no ataxia nor incoordination in the fingers. There was no atrophy nor deformity. Plantar irritation caused flexion of the toes on both sides. The nurse from the School for the Blind said she was bright and learned readily. She had taken up the Brill system of reading and writing and had been considered a bright pupil in that respect. For the past six years she had complained of a drawing feeling in the back of her head. In a dark room the pupils show spontaneous variations, dilating and contracting, but it could not be proved that there was a definite reaction to light. The optic nerves were normal, but small. In standing she leaned towards the right. The gait was slightly staggering, but not ataxic. Pressure upon the calves of the legs was painful but pressure on the nerve trunks was not painful. There was no scoliosis nor kyphosis of the spine and no special tenderness.

Several conditions were considered in the diagnosis. One particularly was tabetic amaurosis, a case of juvenile tabes with sudden onset of blindness. Against this diagnosis was the absence of any atrophic change in the optic nerve and the negative neurologic examination. Another diagnosis was the possibility of a tumor at the base of the brain pressing upon both optic tracts. Against this diagnosis was the absence of any change in the optic nerve and the negative X-ray findings. The blood Wassermann was negative. The blood count was normal. The urine was negative. The cerebrospinal fluid showed no increase in cells or albumin and gave a negative Wassermann reaction.

In view of the fact that the patient had normal fundi and normal pupils, but claimed to be completely blind, and also in view of the fact that the patient evidently had an hysterical condition in the legs, the diagnosis of hysterical amaurosis was suggested. The patient was put upon static electric treatments and on the 4th of June, she confessed that she could see. She says that she saw plainly "by flashes," sometimes as plainly as ever, but for the most part it was only lights and objects. She promptly named colors. She did not rotate her eyeballs upon command, though she did so spontaneously. She could read large type. She could place her finger on a definite point. When she tried to read she says it strains her eyes and hurts her head. There was no anesthesia of the conjunctivae.

She has been at the School for the Blind for three years and has learned to read and write by the Brill system, which is quite complicated and the fact that this girl has learned this is a very interesting point and one not hitherto observed in cases of hysterical amaurosis. This morning she was reading the headlines of a newspaper with considerable more rapidity than she reads them this evening. That, of course, is liable to fluctuation. Vision is not completely restored, but I think it will be. The diagnosis is confirmed, and with that diagnosis there is no reason why she will not recover complete vision.

I have had an opportunity of seeing three cases of hysterical amaurosis and they have fallen into the three different classes which Kron has made. A case in which the blindness was merely transitory occurred in a private patient who at the time that she first came to me was suffering from an abdominal complaint which was of hysterical origin. She told me that she had had attacks of transient unilateral blindness accompanied by severe pain over the eye, which had been diagnosed as acute glaucomatous attacks. I had a suspicion that such attacks might be hysterical, and while under my observation she had one of these attacks and I was able to relieve it by suggestion and rubbing the brow with a little camphorated oil. The second case was in a child twelve years of age, brought to the University Hospital. The child showed a unilateral amaurosis. She was diagnosed in the Ophthalmologic Clinic as a case of hysteria and transferred to the Neurologic Clinic where psychotherapy relieved the condition promptly. This present case is one which has had a longer duration for a bilateral amaurosis than almost any case in the literature. It is also unique in the respect that the patient has lived for three years in the School for the Blind without the diagnosis having been suspected. She was not sent to the Hospital with the idea that her blindness might be helped, but because she was developing this peculiar condition in her legs which was also hysterical and which she has also recovered from.

#### DISCUSSION.

DR. GRADY L. CLAY: What is the prognosis?

DR. CAMP: That depends upon the kind of treatment she receives. If we simply content ourselves with bringing back vision with static electricity and suggestion, I think she would have a second attack. On the other hand, if she be treated by psychoanalysis, I think she may be completely cured.

DR. REUBEN PETERSON: How does she look upon this?

DR. CAMP: She is not especially glad to be well, a condition which we find frequently in hysterical patients. She is a little afraid now that she has recovered her eyesight, that she will not be in the pleasant surroundings of the School for the Blind.

DR. NELLIS B. FOSTER: Have you any clue to a psychic trauma?

DR. CAMP: No.

DR. FOSTER: Have they ever turned a neurologist into a blind institution?

DR. CAMP: I don't believe so. I would not be at all surprised if I had an opportunity to examine five hundred blind, to find perhaps two or three cases of this kind. The cases are not confined to women. Harlan's case of ten years duration occurred in a man and Kron's case was in a man.

DR. MAX PEET: Hasn't she been seeing?

DR. CAMP: It is a psychic blindness and this brings up the question of what you call blindness. One might say such a patient was never really blind. You may say that her visual apparatus has always been intact, but she has not perceived. It is as if a person were walking about with his eyes open, but thinking so intently about something, that he did not see, i. e., failed to perceive what was going on about him.

DR. JAMES G. VAN ZWALUWENBURG: Could you get dissociations similar to the alexias and apraxias in cases of this kind?

DR. CAMP: It is possible, but not quite the same as in a case of organic disease.

DR. PETERSON: Would a person like that react from danger? Would she walk over a precipice, or would she instinctively draw back?

DR. CAMP: I think she would draw back. I think if she were walking in a crowded street she would get past people much better than another blind person. I think she might very well react to danger. There are several peculiar things about her appearance that Dr. Clay and myself noticed on her admission. One was that her eyes did not have that aimless nystagmoid movement of the blind, and at first glance it was recognized that this was a most unusual case of blindness, although she was perfectly certain at that time that she had no light perception.

## REPORT OF A CASE OF PREMATURE SEPARATION OF THE PLACENTA COMPLICATING NEPHRITIC TOXEMIA.

LESLIE L. BOTTSFORD, M.D.

(From the Obstetric and Gynecologic Clinic, University Hospital, Ann Arbor, Michigan).

By premature separation we understand the separation before birth of the child of the normally implanted placenta at any time during

the last three months of pregnancy. The condition is also called "Ablatio Placentae" by some authors.

The separation may be complete or partial, but in any case hemorrhage results from the tearing of the placental vessels. The blood may be retained as a retroplacental hematoma; may diffuse around between the uterine wall and the placenta and its fetal membranes; may occasionally rupture into the amniotic cavity; or more usually, provided the fetal membranes are separated, it escapes in part through the cervix. In the first three possibilities we are dealing with concealed, or internal hemorrhage, and in the last one with external or combined hemorrhage. This complication is the true accidental hemorrhage of pregnancy in contradistinction to the unavoidable hemorrhage resulting from all types of placenta previa.

*Frequency.*—Statistics vary as to the frequency of this condition, but in recent years it has been concluded that accidental hemorrhage of different degrees of severity is much more common than the unavoidable hemorrhage of placenta previa. Holmes, of Chicago, in reporting 200 cases claims that one in every 200 labors is of pathologic interest, and that one in 500 labors is of clinical importance from the standpoint of premature separation. The absolutely concealed types are relatively rare. J. Whitridge Williams reports seventeen cases in 2000 labors, in contrast with fourteen cases of previa occurring in the same group at the Hopkins' clinic.

*Etiology.*—Previous to 1885 when Winter directed attention to the frequent association of nephritis with premature separation, the commonly accepted etiologic factors were trauma of any type, relative or absolute shortness of the cord, or profound mental emotion. Endometritis and placental disease or abnormality have also been thought to play a part. Most authorities of late have reported albuminuria associated with at least 50 per cent of their cases. Williams in his complete paper reports albuminuria in eleven of his seventeen cases. It remained present, however, in the urine in only two cases, postpartum. He summarizes by saying: "As a result of my investigation and study I am prepared to admit that trauma may occasionally be a causative factor; that I know nothing of the effect of mental emotion; that endometritis when present is merely an accidental complication but that there probably exists some indirect connection be-



tween toxemic processes and the accident in question."

*Symptomology and Diagnosis.*—Symptoms vary a great deal depending upon the amount of blood lost and the general resistance of the patient. Complete concealment of the hemorrhage is very rare, and usually causes the most severe symptoms, as shock and collapse. The amount of external hemorrhage is not necessarily an index of the severity of the case, or of the amount of separation. The pulse may also not change in rate or volume until late. Practically all cases, however, whether of internal, external or combined hemorrhage show a change in the consistency of the uterus which usually becomes ligneous, and tender to palpation, the patient complaining at the same time of constant aching pain over the lower abdomen, accentuated at intervals by sharper, gripping or labor-like pains.

Whenever antepartum hemorrhage begins and the finger introduced through the internal os of the cervix cannot demonstrate placental tissue, especially if some of the above enumerated symptoms are present, a diagnosis of premature separation must be made. Consideration, however, must have been given to the possibility of uterine rupture, ectopic pregnancy, cervical lacerations, etc.

*Treatment.*—Hard and fast rules cannot be laid down. Every case, even of partial separation, will continue to bleed until the uterus empties itself, or is emptied, and is able to contract down upon the bleeding vessels and sinuses. In addition one cannot judge of the severity of the case by the amount of external hemorrhage present.

Treatment, then, depends primarily upon the general condition of the patient, the apparent loss of blood, and whether or not labor is present.

If the case is a mild one, the patient should be carefully watched, quiet obtained and contractions stimulated. According to Holmes between 50 and 75 per cent of this class of cases will deliver themselves spontaneously. Of Williams' seventeen cases, nine terminated spontaneously with good result. Vaginal tamponade sometimes stimulates contractions, and ergot, or pituitrin in small doses may be administered.

Interference should be made upon the first appearance of serious symptoms. If the os is dilated, use forceps, version, or craniotomy. If the os is not dilated, stimulate contractions by the introduction of a rubber bag; complete the dilatation by larger bags, manually, or by

Dührsens incisions, if the cervix is effaced. Delivery should then be accomplished in the most conservative manner.

In some cases with rigid or unchanged cervixes, or more particularly, with partially or completely concealed hemorrhage, associated with severe symptoms of shock, abdominal Cesarean is the best procedure. In this last group Cesarean is indicated for the reason that the uterine musculature may be to all practical purposes destroyed by bloody infiltrations, a condition referred to as retroplacental apoplexy by Couvelaire. The uterus may fail to contract and fatal hemorrhage ensue following delivery, unless the uterus is removed at once, supravaginally. In fact, all cases are apt to develop postpartum atony and require instant packing for control of hemorrhage.

Most writers now agree that neither vaginal tamponade nor artificial rupture of the membranes are to be recommended, being unnecessary in the mild cases as a rule, and a source of procrastination in the severe cases.

*Prognosis.*—The prognosis depends upon the severity of the case, the best accompanying the milder cases in which the patients deliver themselves spontaneously. Holmes in reporting 200 cases of all types gives a maternal mortality between 50 and 60 per cent. The fetal mortality irrespective of treatment falls between 70 and 85 per cent.

The following case is reported mainly for its etiologic significance:

Mrs. H., aged 30, entered the Obstetric Clinic, May 31st, 1917. She was advanced seven months in her fifth pregnancy. Her general health during the previous pregnancies had been good. The first and fourth pregnancies terminated at term; the second and third at the fourth month, one following measles, and the other from no explained cause. There was a history of several attacks of acute rheumatic fever ten years before, and she had undergone a laparotomy in 1909, at which time an anterior shortening of the round ligaments was performed. There was no history of preexisting nephritis, hemophilia, lues, or other constitutional diseases. Her menstrual periods had always been very irregular, and scanty, the last flow occurring October 15th, 1916.

During the present pregnancy she had been in good health until April 1st, at which time she developed an attack of bronchitis and cough. Dyspnea appeared, followed shortly by edema. For three weeks prior to coming to the Hospital the dyspnea and generalized edema had been

increasing markedly, and she noticed that she passed decidedly less urine than normally. At times she had had asthmatic attacks and had been unable to sleep while lying down.

*Examination.*—Examination on entrance showed her to be a patient of short stature, decidedly obese. Her general appearance was good except for marked dyspnea, with some cyanosis of the mucous membranes. Her mental condition was entirely clear. Over both lungs all types of râles were heard. The heart was normal. The abdomen was symmetrically enlarged, the uterus corresponding in size to a normal seven months pregnancy, with the fetus presenting in occiput right anterior, and fetal heart normal. The extremities were intensely edematous from the knees down, the skin being tightly distended and shiny. The blood pressure was 205 mm, systolic, 135 mm, diastolic. The pelvis was of normal size. Vaginal examination showed a multiparous outlet, the cervix was bilaterally torn with canal patulous, and the fetal head presenting. Catheterized specimen of urine showed eleven grams of albumin per liter, with many casts of all types.

The patient was put to bed and brisk elimination started. About 7:30 p. m. while in bed, she complained of sudden abdominal pain. This became more severe and was shortly followed by external hemorrhage of moderate amount which came in gushes. By 9 p. m. the uterus had become distinctly larger, of hard and woody consistency, and very tender on palpation. Neither fetal parts nor movements could be felt, and the fetal heart was not heard. She complained of constant aching pain across the lower abdomen, accentuated at intervals of every few minutes by sharper cramp-like pains which she probably correctly interpreted as labor pains, although no distinct contractions could be made out by reason of the tonicities of the muscle. Following preparation for labor a vaginal examination was made. The cervix was found not as yet effaced and only admitted the finger. No placental tissue was palpated through the internal os.

It was determined to use expectant treatment and allow labor to continue without interference, as the patient's general condition, pulse, respiration and hemoglobin were practically unaltered. At midnight the bleeding was still continuing in moderate amount. Her general condition was the same, and uterine contractions were not improving. Because of her restlessness and anxiety it seemed unwise to attempt the insertion of a rubber bag through the

cervix without anesthesia, and the latter was not deemed advisable because of her lung condition. The vagina and cervix were, therefore, firmly tamponed with gauze at this time in the hopes of stimulating uterine contractions. In one and one-half hours the pack was soaked through, but contractions were distinctly better in type, and the patient was apparently in the same general condition. Expectant treatment was, therefore, continued and the external hemorrhage gradually decreased. At 9:45 a. m. she had several hard contractions, expelled the pack, and ruptured the membranes. The fetal head at once began to crown, and at 10 a. m. a premature, stillborn, seven months, male fetus was delivered spontaneously without laceration. The cord was of normal length. Immediately following the fetus considerable old dark blood escaped. The placenta was immediately delivered by the modified Credé method, coming away intact, and with it were several large dark clots, one as large as a fullterm fetal head. The entire surface of the placenta was dark in color and covered with old clot. There were no particular macroscopic abnormalities of the maternal placenta found. The uterus contracted down well and remained in good condition with no bleeding. Ergon, however, was given prophylactically.

The puerperium progressed normally, no bleeding occurring at any time. The patient was allowed out of bed on her ninth day, at which time pelvic examination showed normal involution. The urine, however, failed to clear rapidly even with eliminative treatment and diet. Examination at the time of discharge from the Hospital on her fourteenth day, postpartum, showed about one and one-half grams of albumin per liter and a great number of hyalin and granular casts. The blood pressure had dropped to 145 mm, systolic, the edema had entirely disappeared, and no râles were to be heard over the lungs.

In this case the etiology of the separation seems clearly defined. There were none of the suggested factors present, as trauma, short cord, mental emotion, endometritis, or placental abnormality. Instead, we had a definite case of nephritic toxemia of severe grade terminating as per rule at the seventh month. Even had she not developed premature separation the fetus would have had very little chance for life, by reason of the severity of the toxic state and her stage of pregnancy.



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## DISCUSSION.

DR. REUBEN PETERSON: This is one of the severest complications of pregnancy. Fortunately the cases of concealed hemorrhage are not as common as cases where the hemorrhage is external. I haven't the slightest doubt, however, but what many cases of both the concealed and external type are unrecognized. I think that most of us can remember cases of a mild degree where a woman would bleed at the beginning of labor and examination showed that it was not a case of placenta previa, and after the placenta was born you could see where there had been a premature separation. Now it varies from the form where the cases amount to a very little to the severe cases where it is a question whether the life of the mother can be saved, the fetal mortality always being exceedingly high. In a case of this description there is no question about treatment. The conservative form of treatment is the best. If, however, this patient had not responded to the gauze pack, being a multipara, she would have had manual dilatation and an immediate delivery of the fetus and placenta because the only real hope of the mother where there is a severe hemorrhage is immediate delivery.

I have had a number of cases where undoubtedly trauma was the cause of the premature separation. I had one case in a neighboring town which I shall never forget, where a young woman in her second pregnancy about seven months advanced was bumped over a road in an automobile by her husband who delighted in driving fast. When she reached her summer cottage by a lake she began to bleed. They became alarmed and brought her home and I was sent for. She had lost a large amount of blood externally and from her condition there was undoubtedly a good deal of blood in the uterus. The pulse was very feeble and she was extremely pale and shocked. I tried the conservative form of treatment, because she seemed to be so shocked by the blood that had been lost. However, she didn't respond to the packing of the vagina and cervix, and inasmuch as she was losing in strength and the pulse rate was increasing I finally did a manual dilatation and version and delivered quickly. There was an interesting point, by the way, in this case, in that she developed an embolus and had a hemiplegia. She recovered from this and it looked at one time as though she was going to get well, but she later developed a mesenteric thrombus and died.

Where the cervix is rigid and the woman is losing a large amount of blood, and where the condition is critical, I think there is a field for abdominal Cesarean section. I think the vaginal Cesarean section is not indicated for the treatment of this condition. The abdominal Cesarean can be performed and followed by the removal of the uterus. In the serious cases the maternal mortality is high and the fetal mortality is even higher. I think the doctor is to be congratulated upon his success in this case.

DR. CARL D. CAMP: I was very much interested in one statement of Dr. Bottsford that severe emotional shock will cause separation of the placenta. I wonder if that has ever been definitely established. The evidence in favor of emotion causing such a thing I would like to have brought out.

## REPORT OF A CASE OF PELLAGRA.

JOSEPH A. ELLIOTT, M.D.

(From the Clinic of Dermatology and Syphilology, University Hospital, Ann Arbor, Michigan).

The case I wish to report is one of pellagra, a condition which is not seen very commonly in this section of the country, but which is becoming more frequent, and is very common in the southern portion of the United States. I will read the history and then present the case with a short discussion.

The patient, female, American, housewife, aged 51, presented herself because of an eruption on the hands. Her family history has no bearing upon the present trouble. Her past history and marital history are entirely negative.

She dates her first symptoms as beginning four weeks ago following an attack of grippe. During her treatment of this condition she states that the doctor gave her muriatic acid, which resulted in a diarrhea, characterized by mucus and bloody stools lasting two weeks. About this same time the patient first noticed a burning sensation in the mouth, especially affecting the tongue. This has lasted up to the present time. About two weeks ago she had her hands in strongly alkaline water for several hours. The following evening she experienced a burning sensation in the hands and the next morning there was a marked erythema over the proximal phalanges of each hand. This erythema has continued to spread up to the present time and has been accompanied by burning. This latter symptom has been absent since the patient's entrance into the Hospital. She states that for the past two years, since the death of her husband, she has been continually

depressed and melancholy. On further questioning the patient gives a history of having eaten practically no meat for the past several years. She does not remember exactly just how long ago but states that she has had no desire for meat for some time. During all these years her diet has consisted practically wholly of potatoes, oatmeal, vegetables, graham crackers, coffee and tea. Lately, the patient states that she has been very nervous, is unable to sleep and feels depressed all the time. Her appetite has been very poor for several weeks and she thinks she has been losing weight for some time.

The patient is a poorly nourished female of average height and average appearance. Over the hands, wrists and forearms, involving only the dorsum of the hands and extending over the flexor surfaces of the wrists, there is a brown-red pigmentation. The border is sharply demarcated, the distribution is symmetrical and gives a glove-like appearance over the hands. There is desquamation over the dorsum of the hands only. The process extends upward to about the junction of the lower and middle third of the forearms. The papillae of the tongue are atrophied and the mouth has a beefy red appearance. When this patient entered the Hospital we were of the opinion that she had quite marked mental symptoms. However, Dr. Barrett has gone over her carefully, and he is of the opinion that her mental symptoms do not amount to much. So far as we have been able to ascertain, she has had only slight gastrointestinal symptoms.

Pellagra has not been known in this country very long. It was first described by Searcy in Alabama some years ago. Since that time there has been a very widespread distribution of pellagra throughout the south and in many villages and towns three to five per cent. of the inhabitants may be affected. In the village in which I live in Alabama there has been some two or three hundred cases of pellagra. Forty-one per cent. of the negro population affected have died with it, whereas only 12 per cent. of the white population have succumbed.

The etiology of the condition has been a source of worry and interest, and each general practitioner who sees a great many of these cases has a new etiologic factor. In general, we might say that there are two opinions as to the origin of pellagra. One is that it is a metabolic disturbance. The other is that it is an infection. It was held for a long time that pellagra was caused by the ingestion of spoiled corn. However, this theory has never been proven.

Goldberg, in Mississippi, has carried out some rather extensive experiments so far as metabolism is concerned and through the courtesy of the Governor of the State, and with the full consent of a number of convicts, he put a certain number of them on diets, some on high carbohydrate diets and a number on high protein diets. The patients whom he put on high carbohydrate diets developed typical skin lesions of pellagra. After the development of the eruption they were placed upon high protein diets and the dermatitis disappeared. Wood and others believe that pellagra is caused by the lack of vitamins and the disease has also been experimentally produced by feeding patients on high carbohydrate diets in which some of the vitamins have been destroyed. In the newer process of milling meal the corn is heated to 120 degrees and some of the fat removed. Wood claims that the essential vitamins are destroyed in this process. He has noticed that the people who live on bolted meal have pellagra and those who do not use bolted meal do not have pellagra. He uses this as an argument in support of the theory that the disease is due to a lack of certain proteins.

For a long time pellagra has been confined to the poorer classes in the south. Recently some of the well-to-do families have had pellagra in their homes where they had the necessary protein intake, but it might be argued that the patients did not care for such proteins.

On the other hand, there are those who believe that pellagra is caused by specific organisms. Sanburn, who has done more than any other man in the study of pellagra, has always held that it was due to a protozoan transmitted by the bite of an insect. A French pathologist says that he has found an organism in all cases which he has examined. This organism goes through definite cycles, as a streptococcus, staphylococcus, etc., and he has also found it in the spinal fluid and in the spleen of patients suffering from the disease. There has been a commission appointed in this country to try to find out the definite etiology of pellagra. The work is carried on by the Rockefeller Institute. I believe they have come to the conclusion that no specific organism can be demonstrated. On the other hand, they have found in pellagrins organisms which are not normally found in the intestine and they believe that they are associated with the condition, but not necessarily the cause. In the epidemic in South Carolina a marked decrease in the number of cases was reported after the proper care of sewage was



instituted. This would speak in favor of the bacterial origin of the condition.

The prognosis in these patients is very bad, as a large percentage of them die. The treatment of the condition is not satisfactory. Due to the fact that it was thought that the condition might be produced by a lack of certain proteins, these patients are fed on a very high protein diet along with arsenic. Arsenic was once believed to be a specific. However, so far a specific drug has not been found.

#### DISCUSSION.

DR. ROBERT HALE: I feel that one should approach the etiology of pellagra with a great deal of caution. The literature on pellagra today is practically worthless. In the south practically every village has two physicians with two different theories as to the etiology. The commission appointed for the study of the etiology of pellagra has not yet decided as to what it is. In my own experience under Professor Houston in the University of Georgia, we were unable to find any definite history of restricted diet. One case might come in which appeared strongly a case of high protein diet. Another would come in giving a history of a high carbohydrate diet. But observation over a number of cases did not bear out the theory of restricted diet. At the time that Dr. Goldberg was doing his work, my fellow interne and myself ran a series of cases. He had twelve cases and I had ten. He treated his cases with a high carbohydrate diet. I used a high protein diet. All the cases received the same medical treatment with alkalization. He lost two patients, but they were nearly dead when they came in. I lost none. In view of the fact that improvement has been found to result from sanitary measures, I am inclined to lean to the infection theory. It has been shown at the last meeting of the Texas State Medical Association that the incidence of the disease has decreased in the state of Texas due to sanitation. I am quite sure that the sanitary improvements have been important.

As to the mental symptoms, one often hears of a diagnosis of pellagrous insanity. You may have a typical maniac depressive insanity which is offset by the exhaustive state of the disease. You may have a mental confusion or asthenic state. Another type is a mild depression which runs along with the disease, and you meet that with any acute infection and any chronic disease. The most common mental symptom found in pellagra is the toxic delirium.

As to the treatment, as Dr. Elliott has said, there practically is none. In my experience in Georgia the prognosis in the younger cases was not grave. They would recover by hygienic treatment in the hospital, but they returned in a year with the same symptoms.

DR. ROY A. MCGARRY: When Dr. Engmann read the report of the work of Dr. Goldberg, he seemed to be quite taken up at the time with the results gained on the high protein diet. He also mentioned some skin involvement which we don't see in books, that is involvement of the scrotum. In a great many of these cases the scrotum was involved by an inflammatory process similar to the condition on the hands. He also spoke of work being done in certain Childrens' Homes there along dietary measures and he spoke of a certain mask-like appearance which these patients have. I would like to ask these men who are more familiar with pellagra whether they know of any involvement of the scrotum, or whether there is anything in the facies in these patients, especially in children, which would lead to a diagnosis.

DR. ELLIOTT: (Closing the Discussion). In regard to Dr. McGarry's question as to the involvement of the scrotum, practically all the literature deals with pellagra in women, but in practically every description we find that the vulva is quite frequently involved. All of the textbooks make mention of this fact and I don't see why it should not apply to the male genitalia as well as in those of women. Of course, pellagra is much more common in women.

*Hyclorite*.—A solution of chlorinated soda, each 100 Gm. being stated to contain sodium hypochlorite 4.05 Gm., sodium chloride 3.20 Gm., calcium hydroxide 0.25 Gm., inert salts 0.92 Gm. It contains not less than 3.85 per cent. available chlorine. Hyclorite has the action and uses of solution of chlorinated soda, U. S. P., but its available chlorine content is greater. One volume of hyclorite diluted with seven volumes of water has the same available chlorine content as neutral solution of chlorinated soda-N. N. R. and is said to be isotonic. The available chlorine content of hyclorite decreases at the rate of about 12 per cent. per year. In order that allowance for this deterioration may be made in the preparation of dilutions to be used in the irrigation treatment of wounds, each bottle of hyclorite bears the date of bottling. The General

Laboratories, Madison, Wis. (*Jour. A.M.A.*, Sept. 29, 1917, p. 1081.)

*Dichloramine-T*, Abbott.—Paratoluenesulphonedichloramide. This is said to act much like chlorazene, but capable of being used in solution in eucalyptol and liquid petrolatum, thus securing the gradual and sustained antiseptic action. Like chlorazene, dichloramine-T, Abbott is said to act essentially like the hypochlorites, but to be less irritating to the tissues. Dichloramine-T, Abbott is said to be useful in the prevention and treatment of diseases of the nose and throat. It has been used with success as an application to wounds, dissolved in chlorinated eucalyptol and chlorinated paraffin oil. The Abbott Laboratories, Chicago.

# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman.....Owosso  
Guy L. Kiefer .....Detroit  
W. J. Kay.....Lapeer  
W. J. DuBois.....Grand Rapids

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Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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November

### Editorials

### SPECIAL MEETING—COUNCIL.

The Council will meet in Special Session at the Hotel Pantlind, Grand Rapids, on November 7th, at 9 a. m., for the discussion of problems pertaining to the War and Society Activities.

W. T. DODGE, Chairman.

### ON DUTY

We publish below a roster of our members who are on active duty and assigned to stations or training camps. The list is by no means complete but is the only official information we have and is secured from the reports of the Patriotic Committees of County Societies that have been received up to October 12th. We will gladly welcome corrections and additional names of any that have been omitted or from whom we have failed to receive official reports. We realize that there are many more Michigan physicians on active duty and cite the six physicians of Owosso who have departed for duty of whom we have no official information.

This brings us to the point we wish to make—Local Patriotic Committees are urged to promptly report the names of members now on duty in order that we may place their names on our Roll of Honor.

### BRANCH

Dr. W. A. Griffith .....Coldwater

### BERRIEN

Dr. W. P. Morrill .....Benton Harbor  
Dr. C. V. Spawr .....Benton Harbor

### CALHOUN

Dr. J. T. Case .....Battle Creek  
Dr. G. C. Hafford .....Albion  
Dr. Wilfred Haughey .....Battle Creek  
Dr. J. J. Holes .....Battle Creek  
Dr. A. A. Hoyt .....Battle Creek  
Dr. A. C. McCurdy .....Battle Creek  
Dr. A. H. Ross .....Battle Creek  
Dr. W. N. Putman .....Battle Creek  
Dr. E. Van Camp .....Athens, Mich.  
Dr. C. G. Wenche .....Battle Creek

### CLINTON

Dr. W. A. Scott .....Benton Harbor

### CHIPPEWA

Dr. A. F. Lemon .....Sault Ste. Marie  
Dr. R. C. Winslow .....Sault Ste. Marie

### HOUGHTON

Dr. P. D. McNaughton .....Calumet  
Dr. F. H. Olmstead .....Calumet  
Dr. J. Rhines .....Calumet  
Dr. D. D. Todd .....Calumet  
Dr. A. R. Tucker .....Mohawk  
Dr. R. B. Harkness .....Houghton  
Dr. J. D. MacKinnon .....Calumet

### KALAMAZOO

Dr. R. W. Adams .....Kalamazoo  
Dr. R. E. Balch .....Kalamazoo  
Dr. J. T. Berry .....Kalamazoo  
Dr. O. H. Clark .....Kalamazoo  
Dr. Ward Collins .....Kalamazoo  
Dr. L. J. Crum .....Kalamazoo  
Dr. Dan Eaton .....Kalamazoo  
Dr. W. N. Kenzie .....Richland  
Dr. R. G. Leland .....Kalamazoo  
Dr. T. J. Willey .....Kalamazoo

### KENT

Dr. H. A. Beel .....Grand Rapids  
Dr. H. M. Blackburn .....Grand Rapids  
Dr. H. C. Breece .....Ada  
Dr. John Coryell .....Grand Rapids  
Dr. Charles Freeman .....Ada  
Dr. J. T. Hodgen .....Grand Rapids  
Dr. J. N. Holcomb .....Grand Rapids  
Dr. J. C. Kenning .....Grand Rapids  
Dr. A. M. Campbell .....Grand Rapids  
Dr. F. C. Kinsey .....Grand Rapids  
Dr. M. A. Leach .....Grand Rapids  
Dr. A. M. Martin .....Grand Rapids  
Dr. W. E. Wilson .....Grand Rapids

### MONROE

Dr. F. C. Thiede .....Monroe

### MUSKEGON-OCEANA

Dr. C. M. Colignon .....Muskegon  
Dr. B. R. Eastman .....Muskegon  
Dr. C. F. Smith .....Whitehall  
Dr. V. S. Laurin .....Muskegon

### SANILAC

Dr. H. H. Angle .....Snover  
Dr. J. C. Webster .....Peck



VAN BUREN

Dr. N. D. Murphy .....Bangor

WASHTENAW

Dr. R. B. Canfield .....Ann Arbor  
Dr. Chas. De Nancrede .....Ann Arbor  
Dr. Nellis Foster .....Ann Arbor  
Dr. Wm. Gordon .....Ann Arbor  
Dr. Rolland Kraft .....Ann Arbor  
Dr. Reuben Peterson .....Ann Arbor  
Dr. Harry Schmidt .....Ann Arbor  
Dr. Udo Wile .....Ann Arbor

WAYNE

Dr. E. J. Agnelly .....Detroit  
Dr. Warren L. Babcock .....Detroit  
Dr. F. W. Baeslack .....Detroit  
Dr. Max Ballin .....Detroit  
Dr. C. Barton .....Detroit  
Dr. C. H. Belknap .....Detroit  
Dr. H. S. Berman .....Detroit  
Dr. R. H. Bookmeyer .....Detroit  
Dr. W. H. Brown .....Detroit  
Dr. F. G. Buesser .....Detroit  
Dr. J. H. Carstens .....Detroit  
Dr. H. R. Carstens .....Detroit  
Dr. W. G. Coulter .....Detroit  
Dr. E. K. Cullen .....Detroit  
Dr. C. L. Candler .....Detroit  
Dr. T. P. Camelon .....Detroit  
Dr. D. A. Campbell .....Detroit  
Dr. J. C. Dodds .....Detroit  
Dr. A. E. Dreyer .....Detroit  
Dr. H. Clark .....Detroit  
Dr. W. B. Clinton .....Detroit  
Dr. G. S. Coan .....Detroit  
Dr. Maria B. Coolidge .....Detroit  
Dr. R. H. Earle .....Wayne  
Dr. G. S. Foden .....Detroit  
Dr. W. D. Ford .....Detroit  
Dr. George Fay .....Detroit  
Dr. R. C. Fellers .....Detroit  
Dr. G. E. Frothingham .....Detroit  
P. S. Foude .....Detroit  
Dr. A. C. Fullenwider .....Detroit  
Dr. Wm. Gramley .....Detroit  
Dr. B. D. Harrison .....Detroit  
Dr. T. B. Henry .....Detroit  
Dr. L. J. Hirschman .....Detroit  
Dr. A. D. Holmes .....Detroit  
Dr. W. H. Honor .....Detroit  
Dr. W. H. Hutchings .....Detroit  
Dr. John Harvey .....Detroit  
Dr. A. W. Hudson .....Detroit  
Dr. J. W. Inches .....Detroit  
Dr. C. G. Jennings .....Detroit  
Dr. A. F. Jennings .....Detroit  
Dr. James B. Kennedy .....Detroit  
Dr. W. Y. Kennedy .....Detroit  
Dr. Frederick C. Kidner .....Detroit  
Dr. E. C. Lee .....Detroit  
Dr. A. D. LaFerte .....Detroit  
Dr. W. C. Lawrence .....Detroit  
Dr. C. B. Lockwood .....Detroit  
Dr. McKeane .....Detroit  
Dr. T. A. McGraw .....Detroit  
Dr. C. P. McCord .....Detroit

Dr. H. O. McMahon .....Detroit  
Dr. J. H. McRea .....Detroit  
Dr. G. E. McKean .....Detroit  
Dr. A. McLean .....Detroit  
Dr. W. W. Manton .....Detroit  
Dr. T. B. Marsden .....Detroit  
Dr. Robert M. Martin .....Detroit  
Dr. C. H. Merrill .....Detroit  
Dr. E. P. Mills .....Detroit  
Dr. H. L. Morris .....Detroit  
Dr. R. C. Moehlig .....Detroit  
Dr. J. D. Matthews .....Detroit  
Dr. W. H. Morley .....Detroit  
Dr. F. H. Newberry .....Detroit  
Dr. R. G. Owen .....Detroit  
Dr. W. R. Parker .....Detroit  
Dr. Rolland Parmeter .....Detroit  
Dr. C. G. Penberthy .....Detroit  
Dr. O. W. Pickard .....Detroit  
Dr. W. H. Price .....Detroit  
Dr. C. B. Ray .....Detroit  
Dr. B. R. Shurly .....Detroit  
Dr. W. A. Spitzley .....Detroit  
Dr. W. J. Stapleton Jr. ....Detroit  
Dr. A. Stirling .....Detroit  
Dr. F. R. Suggs .....Detroit  
Dr. Ward F. Seeley .....Detroit  
Dr. H. K. Shawan .....Detroit  
Dr. J. H. Slevin .....Detroit  
Dr. A. R. Smeck .....Detroit  
Dr. Eugene Smith Jr. ....Detroit  
Dr. F. H. Smith .....Detroit  
Dr. F. J. Smith .....Detroit  
Dr. H. W. Torrey .....Detroit  
Dr. J. W. Vaughan .....Detroit  
Dr. V. C. Vaughan Jr. ....Detroit  
Dr. F. B. Walker .....Detroit  
Dr. R. A. C. Wollenberg .....Detroit  
Dr. G. M. Waldeck .....Detroit  
Dr. G. W. Wilson .....Detroit

COUNTY SOCIETIES THAT HAVE CONTRIBUTED TO PATRIOTIC FUND.

Chippewa	Gratiot-Isabella-Clare
Branch	Monroe
Muskegon-Oceana	Midland
Wayne	O. M. C. O. R. O.
Eaton	Alpena
Lapeer	Ionia
Huron	Calhoun
Tri-County	Houghton
Barry	

Now that the fall sessions of our county societies have been resumed we urge that county society secretaries collect and promptly remit this assessment.

The Patriotic Fund was created as an Emergency Fund to aid dependents of enlisted members.

Application for relief from this fund is made by the chairman of the Local Patriotic Com-

mitte who sets forth the facts and circumstances.

The Council's Committee passes on such application and determines the amount to be appropriated. This appropriated amount is sent to the Local Committee for disbursement.

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### "UP AGAINST IT."

True, a slang phrase, but so expressive as to leave any doubt as to meaning. Many a doctor has found himself confronted by circumstances and environments with need for prompt and energetic action so insistent that his ingenuity and skill have enabled him to rise to the occasion and become master of the situation. In the hospital, on the highway, in the home, alone in the country wilds doctors have been "Up against it," time and time again and will continue to be in the future.

We have just read of one who alone, far out of reach of professional or trained assistants, amputated a shattered arm by means of a saw and a razor, using as suture material ordinary linen thread and cambric needle. Recovery without infection resulted.

It occurred to us that it would be interesting to our readers if our members who have been "Up against it" would describe their experiences, set forth the measures employed and send them for publication. These would undoubtedly result in the imparting of ingenious methods that would enable all of us to meet our next emergency with greater equanimity and more readily master the situation. Will you present such contributions?

---

### THE DOCTOR'S CONTRIBUTION.

In this world's war, your service is absolutely essential.

The medical officer bears the same relative position in war as in peace in that he is a conservator of health and life.

Through his skill, thousands of men receiving slight casualties, are returned to the fighting force, thus conserving the physical strength of the army.

In Base, Field and Evacuation hospitals, doctors are as essential as in civil institutions, where the sick and injured are cared for.

As regimental surgeons and on transports and in the Sanitary Corps, must the Government have doctors if we are to terminate this war successfully.

Your contribution to your country at this

critical time is your service which you can give for the period of the war as an officer in the Medical Reserve Corps. That your country needs you, is best answered in that she is calling you now.

The fighting forces are constantly expanding and such expansion calls for additional doctors and even with the troops now in training and under mobilization (about two million) the Surgeon General has not enough doctors to fill the requirements.

Secure an application blank at once; fill it out and present it to your nearest Examining Board. Do not live to regret that you did not have a part in your country's great struggle for democracy which means Liberty.

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### PATRIOTIC FUND.

We append a list of county societies who have remitted the assessments levied to create this fund. We urge that the remaining societies forward their remittances in order that assistance to those who need aid during the winter months will not be withheld on account of lack of funds.

Chippewa	Barry
Branch	Gratiot-Isabella-Clare
Muskegon-Oceana	Monroe
Wayne	Midland
Eaton	O. M. C. O. R. O.
Lapeer	Alpena
Huron	Tonia
Tri-County	Calhoun

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### Editorial Comments

Liberty Bonds—Have you bought yours? The State Society has purchased \$5,000 of these bonds. We know of no other duty that calls for more wide spread and universal response than the purchase of as many of these bonds as possible. Buy one even if you can't go higher than \$50.00.

In our September issue we announced that the osteopaths had secured recognition by the Medical Department of the Army and they were to be admitted on a par with physicians. This information was gained from the public press. We now learn the statement to be untrue and quote the following from the editorial page of an osteopathic journal:



## OSTEOPATHY TURNED DOWN.

"Osteopaths have been refused commissions in the Medical Service of the United States Army, despite the assurance published a month ago that they would be allowed to take the same examination as those having an M. D. degree. When the actual examination papers of osteopathic physicians came into Washington, with applications for commissions, the papers were returned, not accepted. The judge advocate general had ruled that the M. D. degree was essential."

Health insurance is the cry of the hour and is held to offer the panacea for all physical ills. Would it not be far better to devote the million of dollars such a system would cost the country, to furthering the science of preventive medicine, to making the effort to keep people well and healthy, to preventing typhoid fever, tuberculosis and vocational diseases? Such a propaganda would disseminate more and greater aid than the paying of a few dollars per week in sick benefits to the employee who is ill. Would it not be far better to prevent disease than to indemnify it?

The industrial physician has entered into modern industry and he will remain as a leaven for better human relations between employee and employer. As his influence and usefulness becomes universally recognized greater demands for practitioners of that type will be made. Special courses should be offered by our schools to afford opportunity for concentrated training in this special field.

We again present the request for contributions of original articles. At the present time we have but six available articles for publication after which our reserve will be exhausted. We want articles dealing with present day problems and subjects in the entire field of medicine and surgery.

Acting under instructions from the U. S. Public Health Service at Washington, the State Board of Health is required to furnish a weekly morbidity report of all dangerous communicable diseases in this state, to the Division Surgeon at Camp Custer.

In order to make an accurate report, it is absolutely necessary that every physician make an immediate report to the health officer of the township, village or city in which the sick per-

son may be, of each and every case of a communicable disease that they may attend. We trust that you will see the importance of this work and render us every assistance possible. Failure to make these to your health officer is in direct violation of Section 44 of Chapter 35, R. S. 1846, as amended by Act 192, Public Acts of 1915, and this department will insist on the strict enforcement of the law, otherwise prosecution will follow.

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*State News Notes*


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FOR SALE—Central Michigan \$6,000 practice. 100 per cent collections. Auto all year. House, office, garage, electricity, gas, water, furnace. No competition. \$3,000, \$1,000 cash, balance terms. Address c-o S. M. J.

## RESOLUTION.

Michigan State Board of Registration in Medicine  
Recognizing Services of Retiring Members, Drs.  
C. B. Burr, Flint, and Wm. T. Dodge, Big Rapids.

The Michigan State Board of Registration in Medicine in regular session in Lansing on October 9, 1917, cognizant of the expiration of the terms of office of Dr. C. B. Burr and Dr. W. T. Dodge and their retirement from the Board do utilize this means of publicly recording the expression of its members in regard to the services and time expended by these retiring members in performing the duties of their office.

The official minutes of the Board contain continued and repeated recordings of the numerous and varied activities on their part directed toward elevating the standards of medical education, enforcement of the law, increasing the Board's prestige and elevating the value of the Board's certificate to practice medicine. In all they have conscientiously devoted their time, exercised skilled and penetrating judgment and contributed by their personality and acumen a spirit of constructive effort.

Recognizing then, as we do, that their labors have been without pecuniary reward and inspired solely by their loyalty and zeal to the profession of the state and the safeguarding of the communal interests of our great Commonwealth, Therefore,

Be It Resolved—That we tender in behalf of the people of Michigan, whose servants we are, and the Profession of the State, to Drs. C. B. Burr and W. T. Dodge the sincerest heart-felt appreciation for their faithful performance of the duties delegated to them during their tenure of office. Further that we assure them that we will ever be mindful of their constructive efforts and that the State as a whole has reaped profitable benefits from their services, and,

Be It Resolved—That this resolution be recorded in our minutes and copies sent to these retiring mem-

bers, His Honor, Governor A. E. Sleeper and *The Journal of the Michigan State Medical Society*.

Attest:

GEORGE F. LEFEVRE, President.

BEVERLY D. HARISON, Secretary.

As the outcome of the state conference on diseases and the problem presented to cities in this part of the state by the establishment of a national army cantonment at Battle Creek, which was held in Jackson last week, Governor Sleeper has taken action to place Michigan in the forefront of all the states in challenging the prevalence of these diseases. He has named a committee to make recommendations of the war board for the segregation of contaminated persons in a state hospital, and to report on effective means for securing the reporting to health board of venereal diseases as infectious and dangerous to the public health.

Governor Sleeper's committee consists of Dr. W. H. Sawyer of Hillsdale, a member of the state board of health and a U. of M. regent, Dr. A. S. Warthin, pathologist at the University. Dr. Guy L. Kiefer of Detroit, member of the state board of health, Dr. C. G. Parnell, health officer of Jackson, and Dr. R. M. Olin, secretary and executive officer of state health board.

Informal statements of this committee indicate that it will recommend to the war board a program looking toward an effective warfare on venereal diseases of the state, as well as those near Camp Custer. The recommendations will probably include the establishment of a hospital for the segregation of diseased persons, measures to increase the vigilance of local police in rounding up all suspected women, and of health officials in securing the proper reporting of venereal diseases. A state law now requires such reports and provides a penalty for failure to make them, but the law has been everywhere ignored. A bureau of venereal diseases, to act in conjunction with the state board of health, may also be established.

#### DETROIT NEWS ITEM.

Lieut. O. G. Foster has sailed for France.

Capt. F. W. Baeslack has been ordered to Columbia, S. C., for cantonment duty.

Lieut. DeWitt C. Adams has been ordered to Columbus, Ohio, barracks for duty.

Lieut. Brov Hjalmar Larsson has joined the Harper Unit in France.

Lieut. Alex Stirling, U. S. Base Hospital No. 3, has been sent to Paris to study head surgery.

Lieut. Ray Sullivan, U. S. Base Hospital No. 3, has been transferred to the Harvard Medical Unit.

Lieut. Henry R. Carstens has been promoted to the rank of Captain.

After a brief stay at Grayling, the 1st Michigan Ambulance Corps, Capt. R. J. Baskerville in command, has left for a point on the Atlantic coast preparatory to sailing with the Rainbow Division.

Dr. W. J. Core, ship surgeon, now on the "Carpathia" has had the experience of having been torpedoed several times already.

Dr. W. A. MacDonald of Windsor, has been in

France for the past eight months doing the eye, ear, nose and throat work for the Canadian General Hospital No. 3.

Lieut. Hugo Freund has been assigned to active duty in the cardio-vascular department in the examination of recruits at Camp Custer.

Cpts. L. K. Hirschman and Rolland Parmeter are reported to have been detailed to a port in France for special duty in connection with matters of supplies and transportation for the Base Hospital No. 3.

Lieut. C. H. Eisman has been ordered to Fort Riley for training.

Lieut. C. P. McCord has been called to active duty.

R. C. Base Hospital No. 36 has its knees crooked, but has not jumped yet. In the enormous parade held in Detroit September 18, its members (all but the goat), marched in a prominent position near the head of the procession. Six members of the Unit have already received medals for distinguished service, having recently been presented with medals by Detroit Commandery No. 1. These bear on their reverse "To Sir Knight (name) in Recognition of his Service to our Country in the Great War for Democracy, 1917." Maj. B. R. Shurly, Maj. F. B. Walker, Capt. E. S. George, Capt. J. D. Matthews, Lieut. H. L. Hosmer, and Corporal H. T. Carver Jr. were thus honored.

An important decision has just been rendered by the Supreme Court—sustaining the findings of the Industrial Accident Board—upon the expert testimony of Dr. J. D. Dunlop of Alpena. This case is worthy of note because it is the first decision of the kind ever made in the United States. Dr. Dunlop was called in consultation to see a man who was supposed to be dying of anthrax. The doctor, after a hurried examination concluded that the case was one of septic poisoning other than anthrax, and sustained his conclusion on the witness stand. This case has been bitterly fought for nearly two years by one of our powerful insurance companies under the Workman's Compensation Law. Dr. Dunlop maintained that the case was accidental septic poisoning. His contention, now supported by the Supreme Court, makes the company liable. It was a case where the deceased was unloading hides that had been brought from South America. The Supreme Court says:

"It is strenuously insisted by the defendant's counsel that there is no proof that the dust (meaning the dust arising from the hides) contained infection. We think the testimony of Doctor Dunlop tends to support the claim that it did. He testifies in part as follows:

Q. Do you know, Doctor, of your own knowledge whether they (the hides) contain germ diseases?

A. Hides are dead animal matter and they are the same as other dead animal matter. Because they are hides makes no difference.

Q. Then, as I understand it, all dead animal matter contains infection as a general proposition?

A. Yes.

Q. And these hides are no exception?

A. No.

Counsel inquired where the accident is which led



to his death. The accidental feature of the case is that by chance the septic germ or germs were taken up by his respiratory organs and carried into his system, an occurrence which the testimony shows probably did happen, but which was unusual in the work at which he was engaged.

The following men of the Faculty of the Medical Departments of the U. of M. are in active service:

Medical School—Majors, Dr. V. C. Vaughan, Dr. R. Bishop Canfield, Dr. Charles Beyland G. de Nancrede, Dr. Reuben Peterson, Dr. Udo Wile, First Lieutenants—Dr. Clarence Berge, Dr. Nellis Foster, Dr. William Gordon, Dr. Harold Hulbert, Dr. Roland Kraft, Dr. Roy Laird, Dr. Harry Malejan, Dr. Roy McCarry, Dr. Louis T. O'Brien, Dr. Edwin Scarboro, Dr. Harry Schmidt, Dr. John Sherrick, Dr. Louis Stern.

Homeopathic Medical School—Captains, Dr. Hugh Beebee, Fort Benjamin Harrison, Ind.; Dr. C. D. Pullsberry, medical officers' military school, Washington, D. C.; first lieutenants, Dr. Harry Hammel, Dr. R. S. Ideson, Fort Riley, Kans.; Dr. R. H. Criswell, Fort Benjamin Harrison, Ind.

For the first time in the history of the University of Michigan honorary degrees were conferred on distinguished guests on a day other than the annual commencement, when at the convocation day exercises in Hill auditorium the degree of master of arts was conferred on four distinguished British and French army surgeons, who are aiding the American troops.

The men honored are Capt. John Gilmour, British army; Maj. Edouard Rist, French army medical corps, distinguished for his scientific researches on tropical and other communicable diseases; Col. Thomas Goodwin, British medical corps and Col. Charles Derole, French army medical corps, distinguished student of Arabic.

After 106 years as an institution for men only the College of Physicians and Surgeons, the medical department of Columbia University, has decided to admit women. This department is made possible by a gift of \$50,000 from George W. Breckenridge, of San Antonio, Texas. Dean Samuel A. Lambert, of the medical department, said that the change had been made after long consideration and had been hastened by the altered position of women in Europe since the outbreak of the war.

Official announcement is also made that duly qualified women, registered at Radcliff College, would

be admitted to the Howard Medical School this year. The requirements for admission will be the same as for men. The council of Radcliff College will confer the degree of Doctor of Medicine on women candidates who perform the required work, after they have been recommended by the faculty of medicine of Harvard University.

Governor Sleeper has appointed Dr. Guy L. Connor of Detroit and Dr. W. S. Shipp of Battle Creek to succeed Dr. C. B. Burr and Dr. W. T. Dodge as members of the State Board of Registration in Medicine. At the October meeting of the Board Dr. G. L. LeFevre of Muskegon was re-elected President.

Much of the news pertaining to the Detroit profession's activity in army work is derived from the War Bulletin published by the Wayne County Society under the editorial management of Dr. Harold Wilson.

Dr. C. H. P. Murphy of Lansing is serving as acting city physician during the absence of Dr. H. S. Bartholomew, who is stationed at Ft. Benjamin Harrison.

Dr. Eloise M. Walker of Birmingham, N. Y., has been appointed woman physician of the U. of M. health service to succeed Dr. Elsie S. Pratt.

Dr. F. Janney Smith has left the Henry Ford Hospital and is in government service. His present address is Camp Lee, Petersburg, Virginia.

Dr. Clarence Olson of Jackson has accepted an internship at the Royal Victoria hospital at Montreal.

Dr. J. H. Chance and Miss Grace Stock of Metamora were married on Sept. 25th.

Dr. F. W. Martin of Portland has located in Lansing.

Dr. A. K. Bennet of Marquette has resigned as health officer.

Dr. C. D. Brooks of Detroit has entirely recovered from illness, due to an infected hand.

Dr. Chas. N. Race has located in Caro.

## COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

### BRANCH COUNTY

The regular meeting of the Branch County Medical Society, was held at Library Hall, Coldwater, on the above date, and the following business transacted:

Moved and carried, that we hold our annual banquet as usual, at the time of the regular annual meeting—the third Tuesday in January.

Moved and carried, that we send a telegram of greeting to Lieut. W. A. Griffith, now at Fort Ben-

jamin Harrison. The Secretary sent the following telegram: "The Branch County Medical Society in regular meeting assembled—send greetings. We miss you!"

Dr. Carl Sears, of Quincy, was elected a member of the Patriotic Committee in place of Dr. Ray Whitmore, removed from the county.

The following subjects were presented in their order, for general discussion: "The present epidemic of infantile paralysis," "Some recent advances in the treatment of pneumonia," "The profession and the war."

W. H. BALDWIN, Secretary.

#### GRATIOT-ISABELLA-CLARE COUNTY

The September meeting of the G. I. C. county was held September 20 in the Idlehour Theater, Alma. Meeting was called to order by President Gardiner with twenty members and two visitors present. Minutes of previous meeting were read and approved. A letter from the State Secretary was read, relative to the appointment of a patriotic committee, and the collection of \$5 assessment for the patriotic fund. This subject had been brought up at the Ithaca meeting June 21. For the benefit of those not present then Dr. Gardiner explained the matter further. Dr. Richard Smith was asked to tell us how the plan had worked out in Kent county. After his explanation and some further discussion, a motion was made by Dr. Carney and seconded that this patriotic committee be appointed in the spirit of the recommendation. Motion carried. President Gardiner appointed doctors T. J. Carney, W. E. Barston, C. D. Pullen, C. M. Baskerville, and J. A. Reeder.

Dr. R. R. Smith, the guest of the day, then gave a very interesting talk on goitre, illustrated with lantern pictures. The doctor's paper was discussed by nearly every one present, after which a vote of thanks was given the doctor for the excellent way he had presented the subject.

At the October meeting Dr. J. M. Jones was unable to come and sent his associate Dr. H. Payne Lawrence, who presented the subject "The Diagnosis and Surgical Treatment of Ectopic Pregnancy" in a very creditable manner. One very interesting case was reported, in which Dr. Jones operated a case for Dr. Wickware of Cass City removing one tube and in five weeks had to operate the same case for an ectopic in the other tube. Other interesting cases were reported in the discussion by Drs. Brainerd, Bagley, Brandstetter, Baskerville and Foust.

The Society voted to have a banquet for the members and their wives next month in Alma.

E. M. HIGHFIELD, Secretary.

#### MONROE COUNTY

The Monroe County Medical Society at its annual meeting held at Monroe on October 18 elected the following officers for the ensuing year.

President—Dr. S. V. Dusseau, Erie.

Vice-President—Dr. W. F. Acker, Monroe.

Secretary-Treas.—Dr. P. S. Root, Monroe.

Delegate—Dr. V. Sisung, Monroe.

Alternate—Dr. W. F. Acker, Monroe.

Member Med. Def.—Dr. V. Sisung, Monroe.

It is noted from the above that Dr. C. T. Southworth who has served the Society for a long period of years has resigned his office and a successor elected.

The Monroe County Medical Society has contributed its full assessment to the Patriotic Fund.

Drs. A. G. Kaumeyer of Maybee and Oscar Unger of Monroe were elected to membership.

C. T. SOUTHWORTH, Secretary.

#### WAYNE COUNTY

Financial report of the treasurer of the Wayne County Medical Society, August 31st, 1917.

##### Assets.

Land, 44 ft. valued at \$500 per ft. ....	\$24,000.00
Old building valued at .....	6,000.00
New addition valued at .....	35,000.00
Betterments to buildings during 1917 ....	9.30
Furniture and fixtures valued at .....	6,183.32
Library valued at .....	12,000.00
Prepaid insurance .....	57.58
Building fund subscriptions .....	10,554.08
Unpaid 1917 Dues .....	346.16
Cash on hand .....	2,764.59

\$96,915.93

Mortgage on land and buildings .....	\$ 7,000.00
Accrued interest .....	102.35
State society .....	17.25
Membership Fund .....	1,760.82
Funds held in trust:	
Medical Defense League .....	1,812.50
Life Membership Endowment .....	300.00
Library Memorial Endowments .....	300.00
State Emergency Patriotic Fund .....	505.00
Surplus, January 1st, 1917 .....	83,228.07
Gain, eight months of 1917 .....	1,889.94

Respectfully submitted,

THADDEUS WALKER, Treasurer.

##### SECRETARY'S REPORT.

During the past year the regularly elected secretary was absent until January in military service on the Mexican border. He is again serving his country, this time in a hospital in Scotland, which makes it impossible for him to present the secretary's report.

As acting secretary of the Society during a part of last year it is a pleasure to report its interesting meetings.

The Society held 19 regular meetings—exclusive of the meetings of the Surgical and Medical sections—with an average attendance of 122. Three times we passed the 200 mark: once to consider the evils of alcohol and twice to hear speakers on medical experiences in the war. This average of 122 is a distinctly better showing than we made the previous year. Eight of the 19 evenings were filled by out of town speakers.

The Medical and Surgical sections have held seven and eight meetings each, respectively, at four of which the speakers were from out of town. In attendance the Surgical section proved the greater attraction, averaging 111 to the Medical section's 70.



Our membership has not changed much in numbers. July 1, 1916, we had 831 active and 73 associate members. On July 1, 1917, there were 857 active and 37 resident associate members, 27 non-resident associate members, 1 life member, 1 honorary member and 1 honor member.

I would urge upon each one the support of our membership committee in an effort to bring our membership to 1,000 during this year.

The city has grown greatly in the last two years, many new physicians have come and need only an invitation to bring them into our Society.

Respectfully submitted,  
C. E. SIMPSON.

A REPORT ON PUBLIC HEALTH BEFORE THE WAYNE  
COUNTY MEDICAL SOCIETY.

By Dr. J. V. White, Chairman.

I regret to say I am unable to give you the data of our meetings which were held during the past year. This committee made several tours of inspection, accompanied by our Health Officer, Dr. Price, whose courtesy permitted us to see places that were so unsanitary that it was impossible to describe it in this brief report.

The laws governing the housing conditions should be enlarged to permit more authority to be vested in the Health Department, so that whenever the Board of Health authorizes any improvement in certain directions, its word should be final. We had an expert here from New York last spring consulting with us, how best to deal with these unsanitary conditions. We, therefore, concluded that inasmuch as our knowledge of sanitation was limited, it is better that we should do everything we could to assist the Health Officer other than to be the aggressor in this special field of sanitation.

The housing laws here are much like those in other large cities and from information obtained from reliable sources, we found that their laws were subjected to as just criticism as our own have been here.

Consequently, have the Board of Health and those responsible for the Housing Committee in Detroit, arrive at some tangible solution of this mooted question. Do it before our citizens have been exposed to the deadly germs that infest those places of poor habitation; and do it before those who are unfortunate enough to be compelled to live under such an environment.

REPORT OF ENTERTAINMENT COMMITTEE.

Wayne County Medical Society:

Your Committee on Entertainment respectfully begs to submit the following report for the past year:

Receipts from the raffle held in Nov., 1916 \$218.50  
Expenses incurred from raffle ..... 173.95

Balance on hand ..... \$44.55

DR. A. D. LAFERTE,  
DR. EDWARD MOONEY,  
DR. J. H. BOULTER,  
DR. WADSWORTH WARREN,  
DR. WILLIAM E. KEANE, Chairman,  
Committee on Entertainment.

REPORT OF THE BOARD OF TRUSTEES, 1916-1917.

To the President and Members of the Wayne County Medical Society:

During the year there have been nine meetings of the Board of Trustees. On the whole, it can be said the Society is in a prosperous condition. Four thousand dollars have been paid on the mortgage leaving a balance of seven thousand still owing. By a rearrangement of the space on the second floor more room has been provided for the Clinical laboratory, thus slightly increasing our income from that source. We have been somewhat unfortunate in losing as tenants the Fine Arts Society and Nurses' Central Directory, the latter organization having just completed a club house of their own. The question of the purchase of the property immediately east of ours was thoughtfully discussed at several of our meetings and it was finally decided, on account of the unsettled state of affairs, due to the war, that the matter be left in abeyance for the present. Owing to the absence from the city of every member of the Board except the secretary, this report is more or less fragmentary and incomplete.

JOHN N. BELL, Secretary.

REPORT OF HOUSE COMMITTEE.

The House Committee, through its chairman, begs to make the following annual report:

Auditorium rentals .....\$1,887.05  
Auditorium expenditures ..... 1,475.40  
House rentals ..... 2,146.90  
House expenditures ..... 2,316.80  
Cafe income ..... 1,035.19  
Cafe expenditures ..... 1,257.07  
Office expense ..... 1,426.33

Office expense covers salary of House Secretary, monthly auditing of books of the Society, office printing, stationery, telephone, postage, etc.

The floor of the Auditorium was refinished during September, 1916, at an expense of about \$220. The floor covering for same was laundered. This year, the floor should be cleaned, at a reasonable cost, and new cover purchased.

New screens for auditorium were put in in May, 1917, and additional fire extinguishers placed after fire of last spring.

Fire, starting in boiler room of basement, resulted in a damage to building of about \$170, which damage was entirely covered by insurance.

Two accounts, one of about \$45 and the other \$25, are the only bills outstanding for rental of the auditorium. The Finnish Marxian Club signed contract for rental of auditorium for one year, beginning February, 1917. They paid their rental of \$200 per month in advance until month of June. They stayed on through that month until the 17th, at which time they left, making no excuse for leaving, giving us no notice nor paying for rental for the month of June. Their excuse, when we were finally able to locate the Secretary of the club, was that they had no funds to pay for the rental of the auditorium, but that they would pay later. They still owe us for June dates used, about \$45. This account is in the hands of the Physicians' Bureau for collection. The Letatitia Men's Club rented auditorium for June 5, deposit made for same, but balance was not

settled, account no funds. They promise to pay later.

The Prismatic Club, who for the past several years have rented the dining rooms of the Club for each Saturday night, moved to their new and larger quarters June 1st.

The present international conditions are without doubt responsible for the cancelled contracts and non-renewals.

It has been a pleasure to welcome and assist in every way possible the wives of the members of the Wayne County Medical Society, who have been occupying the auditorium two days each week in making up hospital supplies for the Red Cross.

H. R. VARNEY, Chairman, House Com.

#### REPORT OF THE LIBRARY COMMITTEE FOR THE YEAR ENDING SEPTEMBER 1, 1917

In a general way it may be said that the Library has made substantial progress during the past year. After much discussion and many meetings of the Committee, a definite plan was adopted for the purpose of raising money in a sufficient amount to place the Library upon an independent basis. These plans reached maturity just as war was declared, and the general disarrangement of ordinary matters which followed caused your Committee to defer any efforts to carry them out. During the winter a special program was prepared for the members of the Society devoted to the interests of the library, but owing to the misfortune of extremely bad weather on that particular evening, only a very small number of members were present.

It is the intention of your Committee during the ensuing year if it seems practicable to raise money for the library and to endeavor to put the plans it has proposed into operation. If this is done, due notice will be given to the members of the Society and assistance will be most heartily welcomed.

The librarian has prepared a complete list of the periodical literature on our shelves, so that we are now in a position to know not only what we have, but what we lack. It was the intention of the Committee to provide the library with such a complete list of periodicals that practically all important current literature would be at the disposal of its readers. The total number of Journals now regularly received is 118. At the request of Dr. H. M. Rich, a considerable number of books which were in duplicate have been placed in the library of the Detroit Tuberculosis Sanitarium. From other duplicates now in the library, it is probable that other similar loans will be made to other institutions as their wishes become known.

During most of the year, the Library has been kept open, not only during a large part of the day, but for several hours in the evening as well. The number of readers registered since November 1, 1916, to September 1, 1917, is 1,716. Since October 1, 1917, 708 books have been in circulation. Gift of books and journals have been received from: John Bell, F. N. Blanchard, L. Breisacher, H. P. Carstens, J. H. Carstens, Ray Connor, J. H. Dempster, Geo. Duffield, G. G. Gordon, Wm. Harvey Estate, Chas. Hitchcock, A. D. Holmes, R. C. Jamieson, Nathan Jenks, A. Jennings, R. K. Johnson, F. C. Kidner, A. Lappner, C. H. Leonard, R. E. Loucks, Julia

Low, T. A. McGraw, W. P. Manton, Michigan State Library, E. T. Milligan, S. G. Milner, W. H. Morley, Anna Odell, Annette Odell (books of the late Robert Odell), Mrs. Ohlmacher, R. G. Owen, R. M. Rawle, H. M. Rich, R. S. Rowland, H. E. Safford, Herman Sanderson, G. H. Sherman, E. H. Sichler, C. E. Simpson, J. H. Slevin, F. B. Walker, Mrs. F. D. Wheeler, W. J. Wilson, Jr., A. Windsor, J. A. Winter, Casey Wood (Chicago), American Institute of Homocopathy, Thaddeus Walker, E. M. Houghton.

Sixty-five journals have been subscribed to from the library fund. The following subscribed to journals for the library: John Bell, Don Campbell, Detroit Clinical Laboratory, Detroit Ophthalmological and Otolological Club, Detroit Oto-Laryngological Society, George Fay, David Inglis, F. C. Kidner, T. A. McGraw, W. H. Morley, W. J. Wilson, Jr.

Eight boxes of books have been sent to other libraries at the request of the Exchange at Baltimore. An equal number has been received through the exchange.

A considerable number of books have been borrowed from other libraries—the Surgeon-General's at Washington, D. C., and the University of Michigan Library. Eighteen books were borrowed during the first four months of this year.

It has been the definite aim of your Committee to carry on its work so as to lay the foundation for a plan by which in the course of reasonable time this Library could be so far complete as to become an institution of the first class. We are still of that opinion and our continued efforts will be in the direction of realizing as far as possible this ideal. The details of the plan have already been submitted to you. You are aware of the various special endowment funds which have been created. Within a short time an explanatory booklet will be sent to every member of the Society fully explaining the plans of the Committee and asking for your personal co-operation.

HAROLD WILSON, Chairman.

### *Book Reviews*

THE MEDICAL CLINICS OF NORTH AMERICA, July 1917. Vol. I, No. 1. Published Bi-Monthly. By W. B. Saunders Company. Price, per year, \$10.00.

This is the first number of a series that was formerly the medical clinics of Chicago but which has been broadened in scope so as to include all of the principal medical teaching centers of North America.

This number is the Johns Hopkins number and contains contributions from the Clinics of Janeway, Barker, Mosenthal, Fletcher, Haurenau and Brown and covers a range of subjects including Hodgkin's Disease, Diabetes, Meningitis, Heart Lesions, Raynaud's Disease Arthritis, Gastro-intestinal and Post Operative Medical Care.

This series will enable the reader to derive personal benefits almost equivalent to attendance on these clinics and imparts to him a broadening mentality which must ensue from a studious reading of the discussion of every day problems that confront every practitioner.



**CLINICAL CARDIOLOGY.** By Selian Neuhoﬀ, B.S., M.D., Attending Physician Lebanon Hospital. The MacMillan Company, New York. Price, \$4.00.

The author has here presented an excellent compilation of clinical interpretations of the findings and tracings of instrumental recording apparatus employed in the examination of cardiac disease and abnormality. It is a work that will surely meet ready favor with the physician.

**THE FUNDUS OCULI OF BIRDS ESPECIALLY AS VIEWED BY THE OPHTHALMOLOGIST.** A Study in Comparative Anatomy and Physiology. Casey Albert Wood. 145 drawings, 61 colored paintings. The Lakeside Press, Chicago. Price \$15.00.

This is a splendid and pretentious presentation of the subject exhibiting much expenditure of time and effort. The profession is presented valuable information and will find this volume of extreme interest meriting the devotion of time and study of the subject.

**INTERNATIONAL CLINICS, Vol. III, 27th Series.** J. B. Lippincott Company, Philadelphia. Price, \$2.00.

## Miscellany

### CHLORETONE AS A HYPNOTIC AND SEDATIVE.

Administered internally, Chloretone passes unchanged into the circulation and is deposited in considerable quantities in the cerebral tissue, the patient falling into a profound sleep. Its action is like that of natural fatigue. Hypnosis passes off gradually, and no habit is formed. Acting upon the central nervous system, therapeutic doses have little or no effect upon the heart and respiration centers.

Chloretone possesses a wide range of therapeutic applicability. It is a valuable sedative in alcoholism, cholera and colic. It is useful in epilepsy, chorea, pertussis, tetanus and other spasmodic affections. It allays, in most cases, the vomiting of pregnancy, gastric ulcer and seasickness. As a sedative and hypnotic it is indicated in acute mania, puerperal mania, periodic mania, senile dementia, agitated melancholia, motor excitement of general paresis, insomnia of pain (as in tabes dorsalis, cancer and trigeminal neuralgia), insomnia of mental strain, insomnia of nervous diseases, etc. In insomnia it is often effective when other drugs have failed.

The therapeutic dose for an adult is ten to fifteen grains. Good results, however, have been had with doses as small as seven and one-half grains. Sleep usually follows in half an hour to one hour. The administration of Chloretone is not attended with digestive disturbances.

**Betanaphthol Benzoate-Calco.**—A brand of betanaphthol benzoate, complying with the New and Nonofficial Remedies standards. The Calco Chemical Co., Bound Brook. N. J. (*Jour. A.M.A.*, Sept. 8, 1917, p. 821.)

**Chamley, Cancer Quack.**—S. R. Chamley, sometimes spelling his name Chamlee, is the "cancer cure" quack who frightens impressionable women into the belief that "any lump in woman's breast is cancer." In spite of repeated prosecutions by the postal authorities, he is still active. Now he offers to instruct homeopaths and eclectics in the "cancer cure" business. Chamley asks that mail be sent to "Homeopathic Cancer College," Los Angeles, Cal. (*Jour. A.M.A.*, September 1, 1917, p. 749.)

**Bon-Opto.**—Bon-Opto is advertised to make weak eyes strong. The following non-quantitatives and meaningless formula is furnished: "Chloretone, Zinc Sulphate, Sodium Chlorite, Boric Acid, Menthe Poivre, Camphre de Menthe." The state chemists of New Hampshire report that Bon-Opto contains: sodium chlorid (common salt) 39.52; zinc sulphate (white vitriol) 6.83; boric acid 39.69; menthol, a small amount. (*Jour. A.M.A.*, Sept. 1, 1917, p. 750.)

**Wilson's Wa-Hoo Bitters.**—"C. K. Wilson's Original Wa-Hoo Bitters" was sold as a "Great Blood and Nerve Tonic" and as an unfailing specific for partial paralysis, St. Vitus Dance and all forms of weakness. Federal chemists reported the product to be a watery solution (slightly sweetened) of Epsom salt, salicylic acid and a laxative plant drug with indications of sassafras, gentian and prickly ash. The therapeutic claims were declared false and fraudulent by the government authorities. (*Jour. A.M.A.*, Sept. 1, 1917, p. 750.)

**Ferrivine, Intramine and Collosol Iodine.**—The Council on Pharmacy and Chemistry reports that Ferrivine, Intramine and Collosol Iodine, sold in the United States by E. Fougera and Co., Inc., were found inadmissible to New and Nonofficial Remedies. Ferrivine and Intramine are advertised for the treatment of syphilis, while Collosol Iodine, mercury and iodides are recommended as adjuvants. A carefully controlled clinical trial made by L. W. Harrison and C. H. Mills and reported in the *Lancet* indicated that Ferrivine and Intramine are inefficient as spirocheticides and that the local and general reactions that follow the injection are severe. They say that in the case of Intramine "the pain is undiluted torture." (*Jour. A.M.A.*, Sept. 8, 1917, p. 841.)

**Tyramin as an Adjunct to Morphin in Labor.**—Henry G. Barbour, Yale University Medical School, aided by a grant from the Therapeutic Research Committee of the Council on Pharmacy and Chemistry, has studied the effects of tyramin on the action of morphin in labor. In labor morphin exhibits one desirable effect, analgesia, and two untoward results, namely, respiratory depression in the child and delay of labor. Experimental work at Yale having given no support to the use of scopolamin as an adjunct to morphin in labor, tyramin and similar bodies were studied. Animal experiments demonstrated that tyramin (para-hydroxy-phenylethyl-aminhydrochlorid) counteracted the respiratory depression of morphin. In man, from 40 to 50 gm. of tyramin, administered simultaneously with a

therapeutic dose of morphin of 16 mg., completely antagonized the depressant action of morphin on the respiration. The effects of morphin-tyramin on normal labor is being studied at Yale. So far it appears that analgesia is as complete as if morphin were given alone. The respiration of the mother is increased rather than depressed and the condition of the children is quite satisfactory. Further, the uterine contractions have always been increased in frequency and in degree. (*Jour. A.M.A.*, Sept. 15, 1917, p. 882.)

*Iodine Ointments.*—An examination of iodine ointments made in the A.M.A. Chemical Laboratory by L. E. Warren demonstrated that when made according to the method of the U. S. Pharmacopoeia

(dissolving iodine in potassium iodide and glycerine and then incorporating with benzoinated lard), about 20 per cent. of the free iodine used combines with the ointment base. On standing for a month a further quantity of 5 per cent. goes into combination, and after this no further loss of iodine occurs. The composition of iodine ointment, U.S.P., after a month or more is approximately: free iodine, 3 per cent.; iodine combined with fat, 1 per cent.; potassium iodide, 4 per cent.; benzoinated lard (containing combined iodine) 80 per cent. The U. S. Pharmacopoeia requirement that iodine ointment shall be freshly prepared appears to be unnecessary. It was also found that if iodine ointment is made without the addition of potassium iodide, practically all of the free iodine enters into combination with the fat (*Am. Jour. Pharm.*, Aug., 1917, p. 339).

COMMISSIONS RECOMMENDED IN M. O. R. C. BY THE SURGEON GENERAL

	Quota at 20000	Medical Popula- tion	Aug. 18	%	Sept. 1	%	Oct. 1	%
Alabama	360	2568	240	9.4	249	9.7	277	10.8
Arizona	43	307	50	16.4	51	16.6	61	19.8
Arkansas	370	2637	129	4.9	134	5.1	147	5.6
California	800	5687	533	9.4	554	9.6	614	10.8
Colorado	243	1733	124	7.0	126	7.2	140	8.1
Connecticut	236	1678	153	9.2	156	9.3	167	10.0
Delaware	37	261	24	9.2	24	9.2	30	11.5
Dist. of Columbia	210	1482	178	12.1	186	12.6	199	13.4
Florida	185	1321	187	14.2	193	14.6	201	15.2
Georgia	477	3421	253	7.4	264	7.7	322	9.4
Idaho	62	439	44	10.0	45	10.3	50	11.4
Illinois	1500	10648	1037	9.7	1089	10.2	1291	12.1
Indiana	680	4872	457	9.4	470	9.8	510	10.5
Iowa	525	3751	307	8.2	321	8.6	370	9.9
Kansas	375	2683	270	10.1	272	10.1	317	11.8
Kentucky	500	3584	324	9.1	337	9.4	490	13.7
Louisiana	290	2060	184	8.5	188	9.1	210	10.2
Maine	170	1205	81	6.7	84	7.0	113	9.4
Maryland	320	2292	323	14.1	328	14.3	348	15.2
Massachusetts	800	5869	486	8.3	506	8.6	604	10.3
Michigan	610	4360	565	13.0	576	13.2	621	13.7
Minnesota	340	2447	273	11.8	273	11.8	339	13.8
Mississippi	287	2048	206	10.0	209	10.2	220	10.7
Missouri	895	6399	538	8.4	553	8.7	660	10.3
Montana	89	636	88	14.0	88	14.0	103	16.2
Nebraska	268	1911	227	11.9	228	11.9	262	13.7
Nevada	22	154	19	12.3	20	13.0	32	20.8
New Hampshire	97	690	56	8.1	56	8.1	70	10.1
New Jersey	450	3239	350	10.8	356	11.0	396	12.2
New Mexico	60	430	38	8.8	39	9.1	48	11.2
New York	2182	16670	1736	11.0	1784	11.4	1997	12.7
No. Carolina	295	2102	258	12.2	262	12.4	300	14.2
No. Dakota	82	586	69	11.8	71	12.0	87	14.8
Ohio	1130	8045	654	8.1	676	8.4	806	10.0
Oklahoma	368	2634	206	7.8	216	8.2	252	9.6
Oregon	166	1187	124	10.5	136	11.5	148	12.5
Pennsylvania	1615	11502	1694	14.7	1731	15.0	1895	16.5
Rhode Island	108	772	59	7.6	63	8.2	69	9.0
So. Carolina	195	1399	124	8.9	128	9.1	145	10.4
So. Dakota	95	676	67	10.0	67	10.0	82	12.1
Tennessee	484	3457	245	7.1	252	7.3	297	8.6
Texas	874	6240	518	8.3	536	8.6	655	10.5
Utah	65	465	46	10.0	48	10.3	58	12.5
Vermont	94	668	55	8.2	59	8.8	61	9.1
Virginia	356	2547	208	8.1	213	8.3	250	9.8
Washington	238	1695	190	11.2	197	11.8	231	13.7
West Virginia	242	1729	137	8.0	141	8.2	173	10.0
Wisconsin	393	2803	290	10.4	302	10.9	344	12.3
Wyoming	35	251	9	3.6	10	4.0	15	6.0



# The Journal

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### Original Articles

#### REPORT OF CASES OF COMPOUND FRACTURE TREATED BY BISMUTH IODOFORM PASTE—BIPP (MORISON'S METHOD), HARPER HOSPITAL ON DR. MAX BALLIN'S SERVICE.

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The *Journal of the Michigan State Medical Society* expressed in its October issue, a desire to hear reports on the use of Bipp<sup>1</sup> in treatment of infected wounds. Therefore, I have been requested by Dr. Max Ballin to give results of first cases treated by him at Harper Hospital.

Rutherford Morison, Newcastle-upon-Tyne, in the *British Journal of Surgery*, Vol. IV, No. 16, April, 1917, reports favorable results in treating infected war wounds as follows:

The freely opened wound and surrounding field are cleansed with a 1-20 phenol solution, followed by alcohol. A paste consisting of Iodoform 2, Bismuth subnitrate 1, Lig. petrolatum q. s. ad. to form paste, is then rubbed well into parts of wound with dry gauze, removing any marked excess. Wound then closed with non absorbent sutures. No drainage.

We have had these results:

Case No. 8719. Casmer T., age 5 years. September 18, 1917. Compound fracture of left tibia in its middle. Usual procedures. Sixteen hours after injury, wound Bipped and closed tightly. Cast with window over wound applied. Temperature first day after treatment, 101.5. Primary healing and normal temperature after eight days. See Fig. 1.

Case 8510. Barney P., age 26. Laborer. September 12, 1917. Compound fracture of lower third of left tibia and fibula. Wound was enlarged, fracture reduced after usual aseptic procedures, drainage, dressing, and splint. Three open wounds in leg. Seven days later, slight sero-purulent exudate present, not granulating. All three wounds now

Bipped and closed with waxed silk. Posterior wire splint to lower extremity. Slight evening rise of temperature for next eight days. Wound inspection after one week indicates healing by primary intention. Cast now applied. X-ray October 30 shows callous formation; wound practically healed. See Fig. 2.

Case No. 8603. Leonard C., age 12. September 14, 1917. Compound supra condyloid fracture of left humerus. Fracture reduced same day, wound drained, and splint applied. Daily dressings. On the fourth day, wound gives a sero purulent discharge. Temperature 100.5 Bipp paste applied and



Case 8719. Fig. 1. Wound eleven days after Bipping. Note, that these wounds have been closed tightly, without any signs of active drainage or inflammation following.

wound closed tightly. Plaster cast to extremity with window over wound. Inspection six days later shows primary healing. Very little superficial discharge. Temperature 99. See Fig. 3.

In each case the extremity of the bone was contaminated with street dirt. After each examination of wound, a dry sterile dressing is used. It is not necessary to inspect, if no constitutional signs of infection appear, for days or even weeks. A copious discharge will require a moist alcohol dressing.

After the first dressing, wound may have a soft purulent covering but on removing, the

1. Bipp is the name applied by Morison to paste.

granulations and adjacent skin is found to have good vitality. The frequent dressings are eliminated as are also the complications of active suppuration.

Rutherford Morison believes that the paste



Case S510. Fig. 2. Wound ten days after Bipping.

promotes phagacytoses, stimulates osteogenesis, and that the antiseptic effects spread beyond the local application, causing little if any injury to the tissue.

He has been treating infected wounds by this method since August, 1916. In that time,



Case S603. Fig. 3. Wound ten days after Bipping.

he has had only four cases presenting signs of iodoform or bismuth poisoning. The petrolatum is a factor in preventing poisonous absorption.

All cases treated by Morison have been at

least five or six days old having been brought from the battlefields of France to England and therefore are of the ordinary pyogenic infection. We would suggest that badly earth soiled and lacerated wounds be not treated in this manner until forty-eight hours have elapsed to guard against bacillus of Welchi infection, malignant edema, and all devitalized tissue recognized. For instance, we had a case of malignant edema infection due to presence of dead muscle in wound occurring within sixteen hours after injury. Wound therefore had not been Bipped.

The routine anti-tetanic serum should not be forgotten.

Treatment of osteomyelitic cases and other infected wounds will be investigated further.

Subsequent cases treated in Harper Hospital by other men and Dr. Ballin have given same satisfactory results. Hence, we can recommend method so far, although it will require a long experience to say whether any serious danger points must be contended with.

#### CONCLUSIONS.

The benefits of this treatment are:

1. The possibility of getting early primary union in wounds which by usual methods would require weeks and months for healing with suppuration and granulation.
2. Very few dressings required on account of little or no wound secretion.
3. Possibility of bringing wound edges together at once before scar retraction renders subsequent suturing impossible.

#### A DISCUSSION OF FIFTEEN HUNDRED INDUSTRIAL INJURIES.\*

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.  
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Industrial surgery has outgrown its erstwhile classification as a branch of general surgery. It may now be classified as a distinct specialty. The accumulating literature, the recorded experiences and technic of surgeons have brought to pass the establishment of definite principles and fundamental axioms. A familiarity with their conclusions as well as an observance of their pronouncements is becoming more and more essential to the surgeon who is called upon to render services to this class of patients.

It will be conceded that, to meet up to the

\*Read at fifteenth annual meeting American Association of Railway Surgeons, Chicago, Oct. 17, 18, 19, 1916.



responsibilities imposed upon an industrial surgeon he must, of necessity, remain conversant with the literature upon the subject, and repeatedly review his results and compare them with those reported by others. By so doing he may correct errors of commission and omission and adopt from time to time an improved modern technic.

Thus it has occurred to me that the most suitable contribution in my power to subscribe to the value and success of this meeting would be to discuss certain personal experiences and opinions that were encountered and formulated after reviewing the results obtained in 1,500 consecutive cases of industrial injuries. (By way of explanation I also desire to state that these were cases that I personally attended and consist solely of railroad and railroad shop injuries and are a non-selected group.) The history cards were taken as they came in the alphabetic file until the 1,500 group was reached. They do not include cases occurring at foreign points on the railroad system I represent. I would indeed be presumptuous were I for a moment to imply that I command the ability to present in detail in the time allotted me, the many and pertinent points that were encountered. Such a discussion might be profitable, but its vast extent only permits us to enter into a cursory review. It will, therefore, be my purpose to cause your interest to be directed along another channel, and thus hope to create a viewpoint that will evoke a valuable discussion. Without further effusion I desire first to present to you a general classification of these injuries:

GENERAL CLASSIFICATION.

1. Contusions .....	391
2. Lacerated wounds .....	415
3. Eye injuries .....	242
4. Fracture .....	146
5. Sprains .....	105
6. Penetrating wounds .....	69
7. Burns .....	64
8. Infections .....	63
9. Amputations .....	15
10. Dislocations .....	7
11. Hernia .....	10
12. Gas asphyxiation .....	5
13. Poisoning .....	1
14. Concussion .....	1
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1,534	

In the study of this classification five facts present themselves prominently:

1. That there were but 563 instances wherein Nature's protecting barrier against infection—an unbroken skin—was destroyed.

2. That only 153 cases presented involvements of the osseous structures. (Fractures—dislocations.)

3. That 1,391 cases presented injuries of the soft parts and special organs.

4. That hernia must be recognized as the 10 cases recorded were those in which strangulation came on while on duty in 7 employes and consequently, by reason of inability to accomplish reduction by taxis, herniotomy became imperative.

5. That amputations may be minimized to 1/20 of 1 per cent (257 lacerations of extremities requiring 15 amputations).

6. Death occurred in three instances, giving a death rate of .002. The causes of death were (1) Extensive crushing of hip and lacerations of perineum. (2) Loss of both legs and loss of blood. (3) Crushing injuries to trunk.

ANATOMIC CLASSIFICATION.

1. Head .....	93
2. Face, including eye .....	341
3. Chest .....	71
4. Abdomen .....	21
5. Pelvis .....	7
6. Back .....	51
7. Arms .....	134
8. Hands .....	455
9. Legs .....	166
10. Feet .....	195
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1,534	

The interesting point of this group is the fact that the head and trunk of these employes' physical make-up was involved 505 times, in comparison to 950 cases wherein the extremities were the suffering members; a ratio of about 1:2. (1-1.88+).

Secondly, that the upper extremities, arms and hands, were involved 589 times; and the legs and feet but 361 times—a ratio of about 2:1.

Third, that in the order of occurrence the most exposed and vulnerable parts are:

- Hands and arms.
- Legs and feet.
- Head and face.
- Chest.
- Back.
- Abdomen.

REGIONAL CLASSIFICATION.  
Head.

Scalp cut .....	71
Contusion .....	23
Ear cut .....	3
Cheek cut .....	24
Cheek contusion .....	11
Burn, face .....	5

Fracture of skull .....	3
Concussion .....	1
Nose .....	3
Eyes .....	242
	<hr/>
	386

*Chest.*

Fracture clavicle .....	9
Fracture ribs .....	35
Contusion .....	26
Burn .....	1
	<hr/>
	71

*Lumbar Region.*

Sprains and bruises .....	47
Fracture vertebra .....	3
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	50

*Abdomen and Pelvis.*

Penetrating gunshot wound .....	1
Fracture pelvis .....	4
Contusion .....	12
Hernia .....	10
Scrotum .....	2
	<hr/>
	29

*Arm and Shoulder to Wrist.*

Fracture humerus .....	8
Fracture forearm .....	19
Dislocation shoulder .....	4
Sprains .....	20
Contusions .....	36
Foreign body .....	2
Lacerated wounds .....	11
Burn, shoulder and arm .....	23
Bursitis elbow .....	2
	<hr/>
	125

*Leg.*

Fracture ankle .....	1
Fracture femur .....	17
Fracture leg .....	14
Contusion .....	55
Laceration .....	27
Amputation .....	1
Infection .....	7
Sprain .....	15
Burn .....	11
Sprain ankle .....	26
Sprain knee .....	6
Dislocation .....	2
	<hr/>
	182

*Hand.*

Fractured fingers .....	17
Amputations .....	14
Lacerations .....	196
Contusions .....	115
Infections .....	44
Sprain .....	13
Burn .....	19
Foreign body .....	16
	<hr/>
	434

*Foot.*

Fracture .....	11
Contusion .....	75

Laceration .....	23
Foreign body .....	1
Burns .....	8
Penetrating .....	58
Sprain .....	11
Infections .....	7
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	194

146 fractures involve the following osseous structures:

## FRACTURES.

Skull .....	3
Nose .....	3
Clavicle .....	9
Ribs .....	35
Spine .....	3
Pelvis .....	4
Humerus .....	8
Forearms .....	19
Ankle .....	1
Femur .....	17
Leg .....	14
Fingers .....	17
Foot .....	11
Scapula .....	1
Patella .....	1
	<hr/>
	146

What lesson may we appropriate from the study of these statistical figures and classifications? What is the direction along which, by reason of the experiences gleaned from these cases, we may best direct our efforts to minimize the physical and monetary loss these accidents produced? These questions merit discussion.

Personally, they induced the following conclusions on my part:

1. The necessity of wearing goggles to protect the eyes from entrance of foreign bodies and from trauma. The observance of this recommendation has reduced in our last 3,500 cases the eye injuries 75 per cent. The ever-alert insistence, on the part of foremen and also superintendents, to compel employees to wear goggles is imperative.

2. That infection may be reduced to 0.04 of 1 per cent by a rigid insistence that the first-aid care rendered to all open wounds shall consist of nothing but sterile gauze held in place by a bandage. Although 63 infections were encountered in this group, but 7 occurred after our intervention. Fifty-six came in the first time with infected wounds, neglecting to have their primary injury receive prompt attention.

3. That the employment of Bastianelli's method of wound sterilization—benzine and fresh tr. of iodine—is the technic *par excellence* and has no superior if it be but conscientiously and skilfully employed.

He who still clings to bichlorid, carbolic acid,



soap, water, salves, powders and ointments, is not profiting by the experiences recorded, and is not employing the treatment that published results set forth as most effective.

4. That when thorough work has been performed at the first sitting, then we may well cease all worry of subsequent infection in the greater majority of cases. Further, that such wounds, so prepared and treated, do not require daily dressings or inspections any more than does our laparotomy incision. He who performs such daily dressings invites infection by unnecessary exposure and manipulation, and also increases the financial loss produced by an injury by reason of longer periods of disability and tendency to permanent deformity.

5. That sprains are best treated by strapping or gumgluten bandage fixation, and the encouragement of use and ambulation.

6. That contusions respond most readily to a snug bandage kept moistened with alternating hot and cold alcohol, or witch-hazel solutions.

7. That many wounds, especially of the scalp, do not require suturing. Apposition may be satisfactorily accomplished by adhesive strapping or with bandage. Whenever it is in any way possible to do so we avoid suturing. The suturing of wounds is avoided as often as possible in compliance with a general rule of as little manipulative intervention as is possible.

There are, as stated in the forepart of this paper, many other pertinent and interesting points that might well receive one's detailed study and discussion. These seven points are to me the foremost conclusions and are but briefly set forth with the purpose of seeking the opinions and discussions of you whose work has presented for treatment similar groups of injuries.

Inasmuch as fractured bones will constantly present themselves in any group of industrial injuries the treatment indicated ever concerns us. In this series of cases there were 146 fractures, or 10 per cent of the total injuries.

My position is that all fractures reducible and easily maintained in reduction, then to immobilize them with moulded plaster splints prepared to give the required support for each individual. Where reduction cannot be attained with ease or maintenance of apposition readily accomplished, to then cast them into continuity by plating or wiring by means of open operation. The course to be pursued is determined after having studied the X-ray plate or plates.

Here I want to question the absolute reduction claimed by those decrying the open method. One who has been confronted with the difficulties of reduction in open work cannot help but question complete reduction by manipulation when there are impinged between the fractured ends, fragments of bone, muscle and soft tissue. My further reason for resorting to the open method of treatment is that the results have met up to those enunciated by Lane, namely:

1st. It at once relieves the patient from the pain of any movement of the fragments upon one another.

2nd. It frees him from the tension and discomfort due to the extensive extravasation of blood between and into the tissues.

3rd. It shortens the duration of the period of convalescence, since union is, by first intention, very rapid and perfect.

4th. Lastly, and by far most important, they leave his skeletal bony structure in the condition in which they were before they sustained the injury.

Although my experience may be meagre in comparison to others, it is the lantern that lights the pathway and in its light I must disagree with the statements of those who condemn operative work in compound fractures. With the protection afforded by a rigid technic one may taboo and safely ignore many of the surgical pronouncements of yesterday. One must, however, employ every safeguard and not superficially undertake the carrying out of the indicated surgical treatment. I do recognize that in extensive trauma and crushing of the soft parts it would indeed be unwise to undertake operative intervention. Where there does not exist such extensive trauma of the soft parts, one may, with proper technic, safely institute the open treatment of compound fractures as early as possible.

In 146 fractures 65 were plated, wired or nailed. In this group there were:

Compound-comminuted .....	7
Compound .....	11

In but one instance was an infection encountered, and that was due to no fault in technic but was directly traced to the interference of a new assistant who, unauthorized, opened the dressings on the three successive post-operative days during our temporary absence. In all the others primary union was experienced.

## THE SOLDIER'S HEART.

W. H. MARSHALL, M.D.

FLINT, MICH.

The problem of heart disease in soldiers, now attracting so much attention, is not a new one having been carefully studied in our Civil War by Da Costa. A confusing number of terms have been used—"heart strain," "irritable heart," "soldiers heart," and "effort syndrome." There is no one type of soldier's heart, for every type of organic and functional heart disease may be seen in the wards of a military hospital. Moreover the clinical conditions presented are in no way peculiar to soldiers, and may be recognized in civil life. Admission cards to base hospitals bear the symbols—"V. D. H."—"valvular disease of heart," and "D. A. H."—"disordered action of heart." These hurried diagnoses are made by medical officers on a few isolated symptoms and often have to be revised. In many instances, no heart disease whatever can be determined.

The number of men invalided with these disorders, and the rather unsatisfactory results of treatment, led to the establishment of special heart hospitals for research, the most notable being the Hampstead Hospital, London, where Dr. Thomas Lewis and staff of experts made many interesting investigations and experiments.

Little need be said of the organic heart diseases of soldiers, inasmuch as they correspond closely to those seen in civil life. Prior to the war, Col. R. J. S. Simpson, with a garrison of 5,000 men, observed 274 cases of V. D. H. and 66 cases of D. A. H., during a period extending from 1890 to 1912. Probably aortitis and aneurysm are relatively more frequent in soldiers. In the present war, acute articular rheumatism, with its attendant heart complications has been relatively rare, in spite of the wet and exposure. It should be remembered that cardiac symptoms are frequently the first indication of cardio-vascular-renal disease.

Disordered action of the heart may have been manifest before joining the army, it may occur during training, or may first appear during the strain of military service. In taking histories, one frequently finds that in boyhood, the patient was subject to fainting upon slight provocation. Very often he reports having had an irregular heart in youth, on account of which he did not participate in athletic sports. Many of them were of sedentary habits in adult life:

There are three constant and outstanding

symptoms, viz: precordial pain, dyspnea on exertion and excited action of the heart. In addition, there are many symptoms of a neurasthenic character. The pain varies from uneasiness and aching to sharp, stabbing pains. It is variously located—at the costal margin—"round the heart," "in the chest," or more rarely radiating to the arm and shoulder. It is brought on by exertion and disappears at rest. Breathlessness comes on after slight exertion e. g. a brisk walk of two minutes. The excited action of the heart is variously described, some complaining of "palpitation," others of "throbbing," others of single forcible beats. Actual fainting is not very common, but fully 50 per cent complain of a sense of faintness. Always neurasthenic, they are introspective, have a tendency to exaggerate their symptoms, are nervous, irritable, easily fatigued, and are unable to fix attention.

Upon physical examination, one often sees a man of a spare figure, with a narrow, projecting stiff chest. There is very little respiratory expansion, and very often mouth breathing. Respiration is occasionally of a "sighing type." The pulse rate at rest is usually under 100, rarely is 120, but after effort becomes very fast, 120 to 150, and does not return to its original rate for many minutes. Various types of irregularity in the pulse rhythm are seen. The most common is that called by McKenzie "the youthful type of irregularity," and by Lewis, "sinus arrhythmia," consisting of a lengthening and a shortening of pauses between beats. It often varies with respiration, increasing in rate during inspiration and decreasing during expiration. When it does not have the characteristic respiratory character, it can be made to take on that character by getting the patient to breathe slowly and deeply for a few minutes. It is frequently found in healthy hearts and is, therefore, of no importance. In this connection, the general practitioner in civil life has a lesson to learn. The majority of irregularities of the heart under the age of twenty are sinus arrhythmias. Instead of forbidding our young patients to engage in athletics on this account, we should encourage them to exercise and assure them that the irregularity is of no significance. Rarely, extra systoles, or premature contractions are found by auscultation and by the polygraph. These are clinically of little significance "*per se*." Premature contractions are usually noted by the patient himself, and so cause him anxiety. Often a



heavy meal, excessive indulgence in tobacco, tea or coffee will produce them. We see a lot of these cases in nervous individuals in civil life, and while occasionally they point to changes in the heart that may lead to more serious types of irregularity, yet in the majority of cases, it is not advisable to forbid work and usual pastimes. The apex beat is diffuse and jerky, and would lead one to suspect a dilated or hypertrophied heart. However, on percussion, and on examination the ortho-diagraph, the heart is not found to be dilated, in fact, the size of the heart is usually found to be below normal. Normally, after exercise, the size of the heart decreases by about one centimeter, but in cases of D. A. H., Lewis found no such decrease. There is hyperalgesia of the chest in about 50 per cent of the cases. The hands and feet are cold, blue, and often moist, indicating a vasomotor irritability. Usually a fine tremor is seen, the pupils are dilated, and the reflexes exaggerated.

A systolic murmur is often heard, usually at the apex, and more rarely at the base and mid sternum. It is soft and short, apt to vary with posture, and may be variable from day to day. A bruit of cardio-pulmonary character is occasionally heard at the apex and along the left border of the heart. It is loud during inspiration and disappears on expiration. It is louder when the patient is standing up and diminishes when he is lying down. Many soldiers who have not complained with their hearts have been sent in labeled V.D.H. simply because some medical officer detected a murmur in the course of a physical examination. Many cases of invalidism have been made by excessive but misdirected care of physicians. The presence or absence of a murmur is no criterion whatever of the ability of the soldier to work.

Radial and jugular tracings with the McKenzie polygraph frequently give some interesting findings. Sinus arrhythmia is commonly observed when the heart is slowed down, but is not seen when it is rapid. The jugular tracings leave an increased amplitude, while the radial tracings show very small oscillations. The electrocardiograph has not given results commensurate with the time involved in its use. Blood pressure shows no constant variations. Fluoroscropy and radiography are of great value in determining the size and position of the heart, and in eliminating aortitis and small aneurysms. Examination of the blood shows a slight leucocytosis with a relative increase of lymphocytes. There are no constant urinary findings. The urine is frequently hyperacid,

and occasionally deposits of phosphates or axalates are seen. Spermatzoa in the urine are probably due to masturbation, which in my experience, is a common practice of these men. The carbon-dioxide content of the alveolar air was found by Lewis to be at a low normal limit, in contrast to the high carbon dioxide of patients with heart failure from organic disease.

McKenzie endeavors to impress the profession with the importance of careful history taking in heart cases. One should make a note of all infections, recent and remote. An enquiry should be made into the capacity for exertion at school, and the ability to work afterwards. The effect of training after enlistment should be noted. The reasons for reporting sick should be given in detail and every symptom carefully analyzed. The physical examination should be thorough, including sphygmograph, polygraph, and X-ray. An exertion test should be given, e. g. that of Parkinson. Thus a patient may have a pulse rate of 75 lying down, it may be 100 upon standing up, and it may be 125 after climbing twenty steps. Note whether this brings on objective signs of distress, viz.: change in color, dyspnea and anxious expression.

In differential diagnosis, the medical officer should be careful to eliminate tuberculosis, exophthalmic goitre, and definite heart lesions such as mitral stenosis, aortic regurgitation, aneurysm, hypertrophy of renal disease, auricular fibrillation, syphilitic aortitis and myocarditis. One should be wary of diagnosing D. A. H. where the symptoms date from an attack of rheumatic fever, or where there are still recurrent attacks of rheumatism. Unfortunately, there are a lot of borderland cases where it seems quite impossible to draw a close distinction between organic and functional disease. Such men should be kept in bed under close observation for a few days.

The etiology of D. A. H. involves many factors. The average age is about 30. In 1913, Simpson found 70 per cent under 25, and that 76 per cent had five years of service. Infections, such as rheumatism, tonsillitis and chorea have been reported as existing before enlistment, in 5 per cent to 30 per cent of the cases, and about 20 per cent have had infections such as influenza, enteritis, tonsillitis and pneumonia after enlistment. Tobacco apparently has no effect, as over 50 per cent of the cases did not use it. Most of the D. A. H. patients did not use alcohol at all and were sensitive to its effects. Not over 2 per cent showed signs of hyperthyroidism. Many of them had severe

nasal obstruction and adenoids, and were mouth breathers. Not over 10 per cent attributed their symptoms to a single definite physical strain. Almost all of them had neurotic stigmata and nearly all had neglected athletic training in youth.

What is the nature of the disease? Various theories have been forwarded and none of them definitely proven. Thus, toxemia, bacteremia, hyperthyroidism are possible but not proven. There is no definite proof of myocardial disease. Dilatation does not exist. Lewis has found vagal tone about normal in his experiments with atropine. McKenzie believes "that a soldier's heart is but an evidence of general exhaustion, the circulatory symptoms being but part of the general manifestation." It would appear, that in spite of the newer cardiology, we have not advanced much since the time of Sir Thos. Watson, who wrote in 1845, "palpitation and irregularity may be mere functional disorders that depend on a peculiar and highly sensitive condition of the nervous system."

In order to prevent the incidence of large numbers of cases of D. A. H. in the service, the following points should be noted—care in recruiting—careful gradation of exercises in training—care of the teeth and tonsils—importance of free respiratory passages, and an adequate convalescent period after acute injections.

The treatment of D. A. H. should aim at training the myocardium, and this involves a great deal of time, requiring an average of two months at the least. The patient should start in with fifteen minutes of light exercise, increasing to thirty minutes of hard exercise. Gradually he should be worked up to a route march of four miles or more, at first without pack, then with pack, and then in full marching order. During this training the men may be sorted out. Those who can do all the exercises required for several weeks, may be reported to duty. Those whose symptoms and signs are not at all improved, may be discharged as unfit. Others, intermediate to these, may be assigned to light duty. Rest in bed is positively harmful. These men should be given work and interests, and encouraged to forget about their hearts. Focal infections, dyspepsia, and constipation should receive appropriate treatment. Drugs are of little or no value. Digitalis and strophanthus are worthless. Bromides may be given for a few days at the onset to relieve nervousness and insomnia.

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### ANESTHESIA AND ITS RELATION TO GOOD SURGERY.

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Good surgery is dependent on surrounding conditions just as much as on the surgeon.

If the operating room is unsterile or anything used about the field of operation contaminated, the anticipated and rightfully looked for result is not obtained, and the surgeon feels that his good reputation is somewhat besmirched, and immediately he begins to look around for the cause. But when it comes to the anesthetist, anyone that can make the patient lie still will do. In fact, all the average surgeon concerns himself about is that the patient holds still and lives through the operation. Of course the patient is expected to suffer from shock. We expect him to vomit. We explain all this to the family, and assure them that if he survives this stage, he will recover.

With modern surgery, the patient's recovery depends just as much on the anesthetist as on anyone in the operating room. And we have arrived at a time when we must recognize advancement here as well as in other things pertaining to surgery. All over the country, men are devoting themselves to better anesthesia, and we will be glad when our efforts come to be appreciated.

Let the surgeon prepare the patient for the operation, and let the anesthetist prepare him for the anesthetic. The outcome depends in some measure upon the commencement. The nervousness should be taken away by giving hypodermic medication. Some favor one thing and some another. Personally, I think each case should be considered on its own merits. With the ordinary drop method of administering ether, I do not favor giving scopolamine or hyoscine for the good reason that it is hard to determine just how strong a vapor the patient is getting, and the patient needs more resistance to overcome a possible overdose.

It is much easier to gauge the amount of



ether given if we have a proper apparatus. We carburate the gasoline for our auto, and this properly done makes the motor work perfectly. Could you do it with a squirt can and a wad of gauze? Neither can you get a proper mixture of air and ether to make the human machinery work right by this method; but properly carbureted in a suitable apparatus, perfect results may be had; and instead of a patient more dead than alive at the end of the operation, we have him awake in a very short time, with no shock from the anesthetic, very little or no nausea, and he immediately enters upon the stage of recovery.

Just as surgeons must progress and keep abreast of the times, so must anesthetists; and just as improved instruments and equipment are required, so will it be with the up-to-date anesthetist.

The field of medicine is wide and ever widening, and we are recognizing the value of men who devote special energy along certain lines.

#### ACAPNIA AND REBREATHING.

Acapnia is a deficiency of carbon dioxide in the blood. During the process of normal metabolism, a balance between carbon dioxide and oxygen in the blood stream is maintained.

Does acapnia do serious harm? Quoting from Gwathney:

"Henderson has been able to reduce animals to a state of extreme shock by over-ventilation of their lungs. He asserts that acapnia causes osmotic changes in the tissues, which results in a passage of water from the blood into the lymph and into the tissue cells, and a dilatation of the finer veins. Interference with the normal filling of the right side of the heart by this process is the essential phenomenon in surgical shock. In extreme cases of acapnia, the blood stream is so scant and the respiration so feeble that the tissues do not receive the necessary amount of oxygen. Asphyxical acidosis results which does the body cells irreparable harm."

This goes to show that carbon dioxide is an efficient stimulant to the respiration and circulation.

The ordinary open method of administering ether is an efficient means of producing acapnia, because ether diminishes the formation of carbon dioxide by the tissues, and by stimulating respiration hastens its elimination. This, most of us have observed in cases which are breathing rapidly under the open method, and suddenly stop breathing for a period of from one to two minutes. We elevate the chin, snap a forceps on the tongue and pull it up, press on the chest,

dilate the sphincter muscle, and do many things. Finally the patient begins to breathe and goes on all right, but the respiration is not normal for a long time. This is acapnia, and its harmful effects have been related in the preceding paragraphs.

Now, if, as shown above, ether diminishes the formation of carbon dioxide so needed to maintain respiratory and circulatory balance, a conservation of the limited amount of carbon dioxide thrown off from the tissues under ether is the most feasible thing to accomplish, and this can be done very satisfactorily by the use of the rebreathing bag, by the proper use of which an amount of carbon dioxide approximating the normal can be maintained, thus preventing acapnia and the so-called surgical shock, which is in reality anesthesia shock. By this statement it is not meant to infer that there is no such thing as surgical shock, but that there is a distinctive line of demarcation between the two, a full comprehension of which will show that, with the one eliminated the patient has the corresponding additional chance of recovery.

Rebreathing is of still further value in the maintaining of ether balance. When enough has been given to produce satisfactory anesthesia, even in cases requiring deep narcosis, the anesthetic can be maintained by rebreathing nitrous oxide and oxygen. This is explained by the fact that rebreathing prevents the ether, once dissolved by the blood, from being thrown off as rapidly as it would otherwise be by the lungs, which are the organs by which it is practically all eliminated. For example a patient having a certain amount of ether dissolved in the blood, is given a fresh supply of oxygen and nitrous oxide to rebreath. The ether will be thrown off from his lungs till the tension of its vapor and that of the gases being rebreathed will be equal. When this occurs no more ether will be thrown off till a fresh supply of gas is furnished. Not only can we prevent the elimination of ether by rebreathing, but its elimination can be hastened by a rapid ventilation of the lungs with fresh gas, until, if properly managed at the end of a lengthy operation, he will be almost unconscious of having taken any ether.

Other advantages of rebreathing are:

1. Lessened post-anesthetic vomiting.
2. Decrease in the number of cases of abdominal distention after operation.

### 3. Practical abolition of post-anesthetic lung complication.

I shall take these three subjects up separately.

#### LESSENER POST-ANESTHETIC VOMITING.

As to this, I wish to insert this paragraph in Gwatney's book on page 113, verbatim:

"Vomiting after operation depends on many things besides anesthesia, about 35 per cent of our patients vomit, but the vomiting is usually very slight. Of two hundred patients, only four had more than very transient vomiting. Of these cases, one was a case of exophthalmic goitre, one a case of stone in the common bile duct, one a case of intestinal reaction. The nausea alone seldom prevents a patient from taking water and nourishment at once after operation."

#### POST-ANESTHETIC ABDOMINAL DISTENTION.

It will readily be seen by a little careful thought, that when a patient is anesthetized, every part is equally affected. We also relax the muscles that produce peristalsis. The principle amount of experimenting along these lines has been done by Cannon and Murphy. They observed a delay in the emptying of the stomach contents into the duodenum, and a slowing in the passage of food along the intestine, after etherization.

Henderson has shown that the normal intestinal movements which cease after laparotomy, can be restored by passing a stream of carbon dioxide over the exposed bowel.

By using the rebreathing method, the smallest possible amount of ether is used. The carbon dioxide conserved stimulates peristalsis, and thus we have an explanation of how post-anesthetic abdominal distention is so nearly eliminated.

#### PRACTICAL ABOLITION OF POST-ANESTHETIC LUNG COMPLICATIONS.

With regard to lung complications, it is again to be seen that on account of the small amount of ether used, the respiratory mucous membrane is not irritated so badly, resulting in less mucus thrown off to be aspirated into the lungs. The respiratory center is not interfered with, and every part of the lung is aerated very soon after the ether is withdrawn.

#### ANOXEMIA AND OVER-DOSAGE OF ETHER.

Anoxemia and overdosage of ether are evils, which are almost unavoidable with the ordinary, mask, gauze and towel methods and that they do serious harm will be shown in the following paragraphs:

It has been shown that in extreme acapnia the blood stream is so scant and the respiration so feeble, that the tissues do not receive the necessary amount of oxygen; resulting in asphyxial acidosis; this condition does actually obtain and it becomes necessary that we come to appreciate it fully in order that we comprehend the dangers of the so-called open method, which as stated before is not open at all.

We now draw the conclusion that, oxygen is necessary in the blood, carbon dioxide is just as necessary, and there must be a balance between them. We conclude further that a deficiency of either or both is very injurious, that an excess is injurious because it is capable of producing acapnia. But on the other hand hypercapnia is not injurious unless carried to great extremes, a mild degree even being beneficial in that it stimulates respiration.

The question has arisen and been elaborated on a great deal as to what are the causes responsible for the ill effects of the closed method. The following are held as such:

(1) Anoxemia: (2) Overconcentration of the ether vapors; (3) Toxic organic substances in expired air; and (4) Excess of carbon dioxide in expired air.

To answer these we quote from Gwathney:

"There is reason to believe that the first and second of these possible causes are the real ones. From our present knowledge, the third is not important, since physiologists have demonstrated that there are no organic substance in expired air, or at least for practical purposes of anesthesia our clinical results indicate that such substances even if they do exist, need not be seriously considered. The excess of carbon dioxide is harmless, and can be utilized to good advantage.

It would seem that this ought to settle this matter, so we will leave it and take up the subject of overdosage of ether.

Experiments on animals have brought out the fact that the greatest concentration of ether vapor that can be borne by the respiratory mucosa without injury is 6 or 7 per cent. Examination has demonstrated that in many instances the concentration reaches as high as 34 per cent. Now if as stated 6 or 7 per cent is all that can be borne without irritation, what is the result of so great a concentration?

Experiments on animals have shown that the mucosa of the air passages bleeds under strong irritation, furthermore an overstimulation produces an excess of mucus and saliva to be aspirated into the lungs.



## NITROUS OXIDE.

It has been shown by the misuse to which the dental profession put this gas, that, used alone it is unsafe; but later in the hands of the medical profession, when combined with oxygen and ether, if needed, it has become the safest of anesthetics.

An ideal anesthetic would be handled in the following manner: Give hypos of whatever is indicated, but enough to render the patient somewhat drowsy. Commence the anesthetic with nitrous oxide and oxygen, which have no odor and do not inconvenience the patient in any way, but, rather gives him a feeling of assurance. When he has lost consciousness begin combining ether with it and continue this, gradually increasing the ether till the desired relaxation is accomplished, hold him in this condition as nearly as possible for about one-half hour, when if the rebreathing method is used it will be found that it requires less ether to maintain the proper degree of relaxation, turn off the carburetor a little, a little less will be required, and less and less, until, at the end of a lengthy operation very little will be required to maintain complete relaxation. As the operation nears its close, the ether is withdrawn and nitrous oxide and oxygen are used again, which will extract the ether till the patient is practically rid of it and its effects, by the time the surgeon is through. When all is finished, gently place the patient in bed, make him as comfortable as possible, and he will usually sleep until the ill effects of his operation have worn away.

This is the method now in use in nearly all the larger hospitals. Many surgeons and some of renown, are hesitating about using it, but use it they must sooner or later, and the public will soon note its benefits and demand its use.

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## THE RECLAMATION OF USED ALCOHOL.

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Much has been said and written on the subject of the reclaiming of gauze, and on the universally felt need of the extreme economical use of all surgical supplies, that I wonder no one has concerned themselves with the problem of the reclamation of used alcohol. At this time of great demand upon our people for supplies of all kinds it becomes the duty of every

institution as well as individuals, to do their part in the plan of conservation. Alcohol is generally conceded to be one of the best all around germicides and, when tax free, one of the cheapest even during our present disturbed economical and civic condition. Because of this fact, a large amount of alcohol is wasted which might be saved. Everything which can be done in conserving the supply of alcohol should be done. Immense quantities are being used by the government for army and navy purposes, in the manufacturing of ammunition and in the production of drugs. This increased demand made upon the supplies by the government has necessarily decreased the available supply for other demands and increased the price.

Institutions using the untaxed alcohol can, not only serve their government, but lower their own expenses, not alone by avoiding waste in the use of alcohol but by reclaiming it by distillation of much of that used in the sterilization of instruments and in hand solutions. Even here in our own hospital, where it is essential that the strictest economy be exercised, we found that the alcohol, which is the general hand solution used, was being poured over the hands rather than immersing them in a basin of the solution. After consulting with our doctors, basins containing the alcohol were substituted for the old method. These basins are replenished when needed. The used alcohol from these basins was all saved and stored with that obtained from other sources. At the end of a busy two weeks there were some five gallons in the receptacle. This alcohol contained as its chief impurities iodine, mercury bichloride, lysol, compound cresol solution, soda, lime and oil of cloves, according to the different preparation preferred by the surgeon. Our next problem was, how to reclaim this waste alcohol or render it again usable.

As redistillation is the only method whereby it can be made safe for surgical purposes, our task was to discover or invent some means of accomplishing it. The purchasing of a still was considered but the fire risks involved caused us to hesitate just at first, and so for a short time a firm undertook the redistilling of the alcohol. From this firm we learned that a tax was placed on redistilled alcohol, which necessitated a visit to the City Hall. Here we were informed by the revenue officer that it was a mere technicality of law, a difference in terms such as this, that if alcohol was rectified, made

absolute, it was taxable, but if redistilled and the institution was under Federal Bond it was not. He also told us that if a still was installed a license would be necessary but also that it involved no expense.

In the process of reclaiming the alcohol it was discovered that with certain stills 75 per cent was the strength of the redistilled fluid instead of 95 per cent, a larger amount could be obtained owing the fact that more of the alcohol would be carried over at a lower temperature due to the difference in the degree of heat needed for vaporizing the alcohol at varying densities.

The result of the investigation was that the five gallons of used alcohol upon redistillation netted us some three and one-half gallons of a 75 per cent solution at a cost of \$1.00. With 95 per cent alcohol at a price of \$2.25 on the gallon, it was a saving of about \$1.25 on the gallon of the 75 per cent solution. It was also further found that a gallon of the used alcohol which represents a 75 per cent solution would, when redistilled to a 95 per cent solution give one-half gallon.

By redistillation, it is possible to obtain from this waste alcohol a product of considerably higher alcoholic strength and comparatively free from impurities, the outlay in expense for the apparatus being warranted by the cost of alcohol saved. This product, however, can be used for external purposes only, as it is impossible to secure a preparation sufficiently pure for internal use without rectification, which process the government does not permit.

The amount of waste alcohol secured from various sources in a medium sized hospital will average at least two gallons a week, which will yield about one gallon of 95 per cent alcohol or a saving at the present price of untaxed alcohol, of \$1.10 a week.

When contemplating the installation of a distilling apparatus it is essential that all phases of the situation be carefully considered, namely: the size of the institution, the amount of alcohol used in the hospital, the wealth of the institution in connection with the cost of the still, and the fire with reference to the structure of the building.

The type of still chosen must depend somewhat upon the amount to be invested and the alcoholic strength desired in the finished product. A comparatively inexpensive still can be obtained which will yield a 70 per cent distillate. This still consists of an evaporating pan

with water jacket heated by gas plate; a retort head leading to a worm condenser which is surrounded by a cold water jacket. However this still is not practicable for general use.

The materials used in the manufacturing of stills are copper, tin, zinc, galvanized iron and iron. All parts of the still with which the alcoholic preparation will come in contact should be made of the copper and tin lined, namely: the evaporating pan, retort head and condensing coils. The water jacket for the condenser can be made of zinc or galvanized iron, and the water jacket for the evaporating pan of galvanized iron with copper bottom, or iron.

The stills vary greatly in size as do their component parts. A convenient size for the evaporating pan is from 3 to 5 gallon capacity, allowing for the distillation of from one and one-half to two and one-half gallons of waste alcohol at one operation, the pan being filled to about one-half its actual capacity to allow for expansion. This pan should rest loosely upon the water jacket in the nature of a double boiler or if tight the water jacket should have a vent to permit the escape of steam, thus preventing explosion from the steam pressure. The evaporating pan should be flat bottomed and shallow to expose as much as possible of the liquid to the heat also to increase the surface for evaporation. The retort is best of dome shape as this favors the condensation of water vapor before reaching the condensing coils. A funnel shaped tube leads from the retort head and connects with the upper opening of the condensing coils. These condensing coils extend in spiral shape to the base of the water jacket and are here furnished with an exit from which the condensed vapor is collected into suitable containers. The coils are cooled by means of running water which enters at the base of the water jacket and is carried away by means of a waste pipe at the top, thus insuring complete condensation of the vapor.

Heat is best furnished by a gas or electric plate although live steam is very practical if it can be obtained.

The Prentiss alcohol reclaimer will yield a distillate of from 90 per cent to 95 per cent and is one of the best but is a more expensive apparatus and for that reason not practical for smaller institutions. It consists of an evaporating pan with hot water jacket similar to the one above but the retort head is replaced by an upright cylinder containing perforated copper



plates arranged in a series, horizontally about five inches apart. These serve to condense much of the aqueous vapor being carried over with the alcoholic vapor and increases the strength of the distillate to that degree. The vapor is then led to a worm condenser by means of a horizontal tube.

An apparatus carefully installed and manipulated affords little danger, no danger if steam heat can be supplied. With an open flame the danger consists in the escape of uncondensed vapor which, of course, is very inflammable.

An apparatus of the size mentioned would require a floor space of about two feet by five feet, so located as to secure gas and running water, with a carry away for the overflow of water from the condenser.

In closing, I would say that it is quite possible for any institution to manufacture its own still at an initial cost of less than the market price. The still for our own hospital is now in the process of making as described above.

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#### EUTOCIA ATTAINED BY RATIONAL METHODS RATHER THAN BY EXCESSIVE NARCOSIS DURING LABOR.

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Eutocia means easy, safe and natural parturition. That is a desirable end which modern obstetrics has in view. The subject is a larger one than merely the attainment of analgesia during labor. Unfortunately we have been assailed recently by a clamor for more analgesia. It is the purpose of this paper to show that analgesia is only one phase of good obstetrics, and that the desire on the part of the profession to be agreeable to popular demand is apt to turn our attention to that end alone. We must always keep in mind that the prime object in parturition is to conduct mother and child through that period in the best possible physical condition. Analgesia must be rated as a fleeting secondary consideration as compared with the vital future welfare of either mother or child.

I wish to combat the tendency which tends to make good obstetrics an act of one idea, child birth without pain. If this continues to be carried to its logical end we will be forced to complete parturition by operative measures while the mother is under the influence of narcosis. I understand that this baneful condition

already prevails among some of the upper class in the east. Could anything be more harmful than to replace nature's method by an interfering one, and that merely for the purpose of relieving temporary suffering? No physician in America should attempt to practice obstetrics without using some analgesia. It is to be hoped that we will be checked in the use of drugs in confinement to their moderate usage.

It cannot be denied that analgesia during labor occupies the center of the stage in obstetrics in America. Various enthusiasts are urging us to adopt every method from the Freiburg Dammerschlag to the American nitrous oxide. One method has its day and is followed with equal enthusiasm by another. Each is tried and not found to be the ideal. To complete the gamut of interest in the subject we are impressed by learned articles by lay writers, and even complete movie performances. In self defense we are almost forced to follow headlong some school of narcosis regardless of its merits. The knowledge that the over use of narcotics is harmful to both mother and child has not been sufficient to meet the propaganda set forth by the proponents of more extensive narcosis. True eutocia is displaced by painless delivery because of popular clamor and professional neglect of real eutocia.

The word pain is a misnomer as commonly used in obstetrics. It should be replaced by the word contraction. To use the one for the other is to cause confusion because we wish to express the activity of the uterine muscle which is described as a contraction. As this has been associated with sensation of pain, the later word has been substituted for the former. This is harmful to the laity because of the association of pain in the thought of parturition, whereas the act is not always painful. It creates a harmful impression on the prospective mother which is needless and it is perhaps the first deterrent suggestion to her against child bearing.

All pain felt by women during labor is produced mechanically by the contractions of the uterus or the pressure on the birth canal, and this is felt in varying degrees of intensity. At the beginning of the first stage there may be strong contractions without subjective signs of pain. When these are felt, it is only after contraction has been established some seconds, and the last of it is not sensed. The pain felt during the fastigium of a uterine contraction is the first class of four types of labor pains. Not infrequently the parturient woman senses

the contraction but does not experience suffering from it. The other extreme is met by hypersensitive women who suffer excruciating pain from the commencement of labor. These frequently are women who suffer from dysmenorrhoea. Others feel the contraction keenly because of an excessive pituitary secretion during labor.

A second subsidiary class of pain is that produced by the pull at the insertions of the round ligaments of the uterus during a contraction. These ligaments act as guys for the steadying of the uterus during contractions and also contract at the same time as the uterus. The pain felt at the uterine insertion of these ligaments is keenly felt by some who describe it as "tearing." This is always felt in threatened uterine rupture when the ligaments are taut.

The third class is the pain in the sacrum due to the pressure of the presenting part of the superior strait. Later it is due to the direct pressure upon the sacrum which may last through the second stage of labor.

The fourth class is due to distension often resulting in laceration of the cervix, vagina, perineum and introitus vagina. This may extend from the latter part of the first stage through the second stage or it may occur only toward the end of the second stage. This pain differs from the other three classes in resulting from physical injury to the birth canal.

The last class of pain can only be relieved by desensitizing the afferent nerves from the injured area. Crile's principle of anoci association may be useful when the area involved is near the outlet of the birth canal. This is more available in multiparae than in primiparae as in the latter there is an area of injury impossible to reach locally. General analgesia is essential in this period because, while we are sure that injury is occurring to the tissues of the birth canal we are unable to reach it by local application. So at the end of the first stage as the external os is distended to laceration, only general narcosis is used customarily. The larger the birth canal the less the suffering and the less the need of narcosis. As the presenting part passes the introitus a general anesthetic is essential as this is the most sensitive area of the canal.

I believe that narcosis is generally given to relieve the suffering of the last class of pain. No physician should be brutal enough to permit a woman under his care to suffer these pains of injury without the relief of drugs. Such practice harks back to the days of barbarism ages

before modern medicine was practiced. It can only react against the reputation of the practitioner. It must not be forgotten that too much suffering occasionally results in nervous invalidism, neurasthenia, psychasthenia or sexual neurosis.

Why should there be so great a variation in the degree of suffering in the first three classes of pain? I consider the excessive suffering as due to one or more of three cause; i. e., increased internal secretion, heredity and environment.

Uterine activity during labor is largely dependent upon the extract secreted by the posterior lobe of the pituitary body. Mostly as hormones other internal secretions augment the contractile power of the uterus. Nature provides an adequate supply of these in normal labor. When the supply is excessive either because of artificial administration or from excessive intrinsic glandular activity, there results more severe contractions, rapider delivery. The result is an increase in pain in all of the four classes. Where excessive dosage has been used extremely painful tetanic contractions occur. The harmful effects to the patient during the period of injury can be partly relieved by complete analgesia. More narcosis than usual is necessary to overcome the strong effects of too great a supply of pituitary secretion whether from intrinsic or extrinsic sources.

It is said that the ultra modern woman is too sensitive to bear children without complete relief from pain which can be attained by drugs not only in the second, but also in the first stage of labor. This hypersensitive type is bred from a stock whose nerves have been fatigued by the strenuousness of modern life. The hereditary weakness is maintained by the offspring and eventually leads to elimination of the stock. This type requires narcotics more than the average during labor; they need ante-natal education, increased self-control and support.

It is my belief that many women suffer unnecessarily from the effects of adverse mental environment during, and perhaps long before pregnancy. We are well aware of the effect of surroundings upon the individual, but we neglect to connect this with the pregnant woman, the most receptive to suggestion and training. This being true, the education of woman during, or even before, pregnancy is essential. It is not a privilege but a duty to instruct the prospective mother as to the physiology of labor. Suggestion should be used to aid her during parturition. This course of training acts upon the parturient in lessening her fear



of the act as well as increasing her power to inhibit sensitiveness to necessary suffering.

A certain amount of knowledge of pregnancy and parturition is necessary for an intelligent woman as she passes through these periods. Co-operation is attained as the importance of these periods is taught. The mother must know what contractions are like, and also the end attained by these. Knowledge will make this time easier to bear, and confidence will replace fear of dystocia. It is not easy for us to realize the foolish concepts of labor an ignorant woman acquires. The fears of ignorance, such as a child being grown fast to the womb, are absent when the mother is informed. The greatest importance of knowledge is in combating fear which rises from ignorance. It is this fear which tends to upset the patient's mental equilibrium and creates or increases pain. So I have seen an ignorant girl in labor working herself into paroxysms of terror because she thought the child could not get out after the first few contractions. Explanation as to her condition brought an end to her pain, the basis of which was fear, and which was very real to her. Woman possesses greater suggestibility, irritability or affectability than man, due to her quicker response to stimuli. Her higher and later acquired nervous centres are less powerful than the more primitive ones, hence the less the power of inhibition, and the greater the emotionalism. In psychoses of the pregnant the resultant response to stimuli are greater than in nonpregnant. Also suggestions are responded to more readily. The so-called nervousness of pregnancy indicates the inability of the prospective mother to inhibit as easily as she could in the nonpregnant state the reactions resulting from ordinary stimuli. She is particularly subject to the effect of psychic stimuli or suggestion.

It is not easy for us to realize that the pregnant woman is peculiarly subject to suggestion. During the forty weeks which comprise the pregnant state, the prospective mother receives and is impressed by an enormous number of suggestions. These are given by friends and medical attendants, or are autogenic. It is peculiar that acquaintances should be permitted to impress the pregnant woman with absurd ideas and fears which leave their heavy imprint upon her mind. Not only the spoken words, but the bearing and repute of the attendant leave their record upon the cortex of the one who is cogitating upon her coming delivery. The confidence which the patient places in the

physician is nothing less than the result of numerous suggestions upon her. When confidence has been established numerous suggestive impulses have acted to produce this state. During attendance upon the pregnant it is of the greatest importance to understand that almost every word and action is a suggestive force upon the patient. Often trivial stimuli are creators of greater results than the greater ones. Auto-suggestion plays a greater role during pregnancy than we are apt to consider. As labor approaches it becomes the predominant thought and all ideas and thoughts are apt to center around it. So the limited knowledge she possesses of labor together with the numerous stimuli of suggestion creates a concept of the act which is absurd to one who understands it as it is. Could we appreciate her conception of the expected delivery we could handle her confinement better and help her mind to grasp the act as it is, so preparing her for her labor.

We often see the effect of adverse suggestion working to such a degree as to cause the patient to lose self-control during labor. Fears, obsessions and ignorant concepts take control of the individual and reason or suggestion are too late to overcome these. Friends have recounted the suffering and dangers of labor to the susceptible mind until the slightest contraction brings a sense of suffering greater than she can bear. The suggestions generated in her months of wondering ignorance which have been nourished by adverse suggestions have helped to create a panicky state of mind which makes pain doubly painful and evolves a sensitiveness of the greatest degree. In her ignorance and disturbed state of mind, terror seizes her, her sufferings increase more from loss of psychic control than from actual suffering. Relief is demanded and only narcosis or forced delivery are of avail at this stage.

The plea for more and varied forms of analgesia and anesthesia during labor is the result of delinquency on the part of the profession in this work. Those women tainted by heredity with hypersensitiveness require a greater degree of analgesia than the average woman. When ordinary women are properly cared for from early pregnancy there is need for only a moderate amount of anesthesia during the second stage of labor. It is because bad influences are allowed to work on her, and the attendant does not make use of all possible means of education and suggestion that the use of drugs has taken the place of importance it has lately in obstetrics. It is necessary to see

the prospective mother often not only for physical examination but for the purpose of instructing her about the physiology of labor. Expectant mothers should know that uterine contractions are essential to open the womb, also the cause and effect of bearing down pains in the second stage; they should be made to understand that time is required for the entire act, and that undue haste is apt to be harmful to both mother and child. The more intelligent the woman, the more she may and ought to know of labor. Assurances are to be given that her condition is normal if possible. Most important is the confidence which is gained by careful attention during frequent calls. During pregnancy suggestions referring to the development of inhibition and those to strengthen her fortitude, and especially those given to counteract adverse suggestions given by alarmist friends are more important than generally considered.

Fortified by facts rather than by a motley array of impressions created from misinformation, the patient is prepared for labor as it is rather than as an autogenetic nightmare. If suggestion has been properly directed by word and act, the patient is better prepared to meet contractions, pain, waiting, even exhaustion with a fortitude which is impossible in neglected cases. The good impressions of months of association leave their impress upon the mind of the patient who has gained a feeling of confidence in her attendant. Worry and fear are absent because she feels secure, and adverse suggestions have not been able to depress her. Knowledge of parturition backed by proper suggestion are the best antidote for excessive druggery during labor.

I attempt to apply psychology in the case of pre-natal cases as follows:

First an attempt is made to analyze the conception the prospective mother has of the act of parturition. Erroneous ideas are corrected by as thorough an explanation as the intelligence of the person warrants. If there be fear, the source of this is sought in order to explain it away. Not infrequently this arises from a related cause such as the possibility of malformation of fetus. As confidence is established fear tends to fade. Therefore every effort is made to create confidence. Thorough examinations with care in detail, such as the taking of blood pressure at each call will do much to start this. Assurances that conditions are normal also tend to place more reliance in her

attendant. A cheerful mien suggests that all is well, so optimism will help to bring a sense of self confidence. Almost all conversation is studied because of the effect that suggestion plays upon this ultra suggestible person. Direct or implied suggestion is used to persuade the individual that the cause of labor to be expected is not too hard to bear, also that her powers of inhibition have great effect in lessening the sense of pain. The more the patient is in contact with her attendant, the more he may use his powers of suggestion. Every effort is made to counteract the effects of mal-suggestion by explanation and the substitution of beneficial suggestion.

During the first stage of labor the patient's mind is kept occupied by having her occupied with light work or conversation with her family. This keeps her mind from herself and tends to make the time necessary for dilatation pass more quickly. As the mind is busy the sense of pain is felt less than when the patient is allowed an unoccupied mind which tends to center itself in the sensation of pain, and so magnify it. Now suggestions tending to lessen the sense of pain are to be used by family and attendant. A calm atmosphere is to be kept, the attendant should be cool, attentive and work deliberately as though he were master of the situation. The eyes and ears of the patient are more sensitive at this time than ever and any indication of indecision or fear on the part of the attendant tends to weaken her confidence in him and creates a sense of fear. This causes her to center her attention on herself in such a way that the pain is felt more severely and the power of inhibition is diminished. Assurance is given to keep up courage. Encouragements is voiced if necessary to let her know that the course of her labor is normal and that she is doing well. Suggestion as to control and the use of inhibition are useful. Of course as the pains become severe and the second stage approaches narcosis is begun when necessary.

One of the important reasons why women in labor should receive hospital care, is the fact that a form of mental discipline replaces her dependence on relatives who are not capable of giving her the proper mental support. So a physician is freed from disturbing external influences and has a better opportunity to be conservative without hindrances from friends or relatives. In hospital work where many girls in the end of their second or the beginning of their third decades are delivered, it is remarkable to see how well they endure labor. This



is no doubt partly due to strength of muscle, abundance of elastic tissue, good innervation, and absence of fibrous tissue. It is also due to a great degree of discipline and morale maintained in an institution. Suggestion is made use of by attendants, and is inculcated among the waiting cases. They gain confidence also by conversing with delivered cases.

It is essential that the physician should consider his ability to properly care for confinement cases. Not all men are so constituted as to be able to carry a patient through this trying state as she should be. Not only are the proper technical training and the possession of good judgment essential for lying in work; physical, moral and psychical strength are absolutely necessary to guide a woman through labor in a state of eutocia. The kind or amount of narcosis given by an accoucheur should not be the criterion of his knowledge or ability in the work. Excessive drugging during labor means

either neglect in preparing a patient during pregnancy or inability to properly conduct confinement. A responsibility rests upon us which we must meet with proper care. It cannot be evaded by substituting analgesia or anesthesia for lack of knowledge, neglect, or absence of moral courage. True eutocia rests not upon drugs, but upon better obstetrics and proper preliminary care.

The care of pain in labor has been dealt with at length in order to combat the propaganda which is exploiting pain-killers for parturition. The skill of the accoucheur is of vastly greater importance in producing eutocia than any single drug. In permitting the use of any narcotic to take the place of unwarranted importance we allow vapidly to replace the essentials of obstetrics. Rather let us train the public to demand good obstetrics with adequate attention to the essential details of our art.

#### PROPAGANDA FOR REFORM.

*Some Misbranded Nostrums.*—The following nostrums have been the subject of prosecution by the federal government under the Food and Drugs Act: DeWitt's Eclectic Cure, containing alcohol, opium and ether.—DeWitt's Liver, Blood and Kidney Cure, essentially a water-alcohol solution bearing a cathartic drug, together with Epson salt, nitrates and iodids. Lightning Hot Drops, containing 60 per cent. alcohol and 48 drops of chloroform to the ounce, as well as ether and capsicum. Mother's Salve Mother's Remedy, a salve consisting of petrolatum, with some glycerin, potassium chlorate and oils of cloves, cinnamon, eucalyptus, sassafras and pine or juniper. Raney's Blood Remedy, a solution of potassium iodid and mercuric chloride in syrup of sarsaparilla with 16 per cent. alcohol. Rattlesnake Oil Liniment, White Eagle Indian Rattlesnake Oil Liniment, containing little or no "rattlesnake oil." Rosadalis, essentially a water-alcohol solution containing potassium iodid and a cathartic drug. (*Jour. A.M.A.*, Oct. 6, 1917, p. 1182).

*Ziradol.*—The Council on Pharmacy and Chemistry reports Ziradol, sold by the Bristol-Myers Company, New York, ineligible to New and Nonofficial Remedies (1) because its composition is secret; (2) because the phenol coefficient is not stated on the label; (3) because its use by the public as a "vaginal douche" is advised, and (4) because the claim that Ziradol is the "Universal disinfectant" is unwarranted. The A.M.A. Chemical Laboratory reported that the preparation is a soap solution containing alpha-naphthol as its essential constituent. (*Jour. A.M.A.*, Oct. 6, 1917, p. 1191).

*Gonosan.*—The Council on Pharmacy and Chemistry reports that Gonosan, sold by Riedel & Co., Inc., is in the form of capsules said to contain oil of sandalwood and kava resin advertised for the treatment of gonorrhea (as indicated by the name). It declared Gonosan inadmissible to New and Nonofficial Remedies because the therapeutic claims are exaggerated; because there is no evidence that the combination of kava resin with oil of santal is superior to oil of santal alone, and because the therapeutically suggestive name is conducive to indiscriminate and unwarranted use of the combination both by the profession and by the public. (*Jour. A.M.A.*, Oct. 13, 1917, p. 1287).

*The Active Principle of the Hypophysis.*—Despite the suggestion obtained from certain advertising claims, the active principle of the pituitary gland has not been isolated in a pure state. An examination of commercial preparation showed that propeoses and possibly peptones were present in all (*Jour. A.M.A.*, Oct. 27, 1917, p. 1431).

*Hainces' Golden Treatment.*—This is sold by the Golden Specific Co., Cincinnati, O., as a cure for the liquor habit which may be administered without the knowledge of the patient. The directions which accompany the three dollar package imply, however, doubt as to the probability of success unless the patient is anxious to be cured of the habit and takes the powders knowingly. The A.M.A. Chemical Laboratory reports that this worthless nostrum consists of powders which are composed essentially of milk sugar, starch, capsicum and a minute amount of ipecac. (*Jour. A.M.A.*, Oct. 27, 1917, p. 1460).

# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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Arthur M. Hume, Chairman.....	Owosso
Guy L. Kiefer .....	Detroit
W. J. Kay.....	Lapeer
W. J. DuBois.....	Grand Rapids

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### EDITOR

FREDERICK C. WARNSHUIS, M.D., F.A.C.S.  
Grand Rapids, Mich.

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All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscription are to be addressed to Frederick C. Warnshuis, M.D., Powers Theatre Building, Grand Rapids, Mich.

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December

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### Editorials

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#### THE SEASON'S GREETING.

Once again we approach the holiday season but under greatly altered conditions and midst an atmosphere that is remote from the spirit of "Peace and Good Will on Earth." Still, notwithstanding this environment of war, strife and bitter enmity, we have not become so calloused or foreign to all sentiment to such an extent that we are wholly unmindful of fraternal greetings and good will.

For some there will be no celebration. They will forego accustomed holiday festivities and find themselves located in foreign fields midst death, pain, distress and physical destruction. Others will remain midst former scenes but burdened with greater tasks and sterner duties that in themselves preclude all thought of the holiday spirit so that they too are prevented from participating in the accustomed manner in the events that characterize Christmas time. Again there will be others, fortunate they are, who will be able to ease up a little, and indulge in a more or less modified form of Yuletide joys and felicitations.

On the whole, however, there will be "that something" that is lacking and the season will be bereft somewhat of its former spirit of "Good Cheer" but not of "Good Will."

To our members in the service at home or abroad, it matters not what his station or loca-

tion may be, we convey the assurance that this year, more than ever, he is the recipient of our fraternal spirit of "Good Will" in the sincerest degree. We wish him naught but what is good and our will, if it may be but realized, is that his life may be conserved, his usefulness maintained, his personality and ability enriched and broadened and that his safe return to home, friends and practice be vouchsafed.

To you, not privileged to serve in the ranks in the field, but who are doing double duty, assuming sterner tasks at home and thus doing your "Bit," we likewise extend cordial greetings and wishes and bid you be of good cheer with every assurance that the faithful performance of your increased work is not passing unrecognized and that you too merit men's heartiest good will and good wishes.

So to all our members, scattered though be our ranks, there goes forth the heartiest good wishes and greetings. We feel assured that all will do their part and honorably acquit themselves so that the end will witness our achievement of a world safe for Democracy and the Christmas and New Year's of the future will be of increased merriness and happiness.

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#### 1918 DUES. ATTENTION COUNTY SECRETARIES!

The Council, in Special Session, created the following rule in regard to the payment of 1918 dues for members in active army service:

*The State Society Dues for 1918 for members who are in active service will be remitted to the extent of \$2.00 thereby making the annual dues to such members \$1.50.*

This enactment places the dues of all such members at \$1.50 which amount should be remitted by county secretaries.

This reduction does not deprive any member of any of the benefits of membership. They will be deemed as members in good standing. They will have the full protection of the provisions of Medical Defense. They will be entitled to *The Journal*. They will continue as Fellows of the American Medical Association.

Some of these men are already on duty "overseas," others will soon depart. It has been suggested that County Societies defray their membership dues from the funds of the County Society in order that their membership be not permitted to lapse.

County Secretaries are reminded that this



reduction applies only to those who are in *active service*. The fact that a member has a commission does not entitle him to these reduced dues—the member must be in *active service* and on *active duty*. Please observe this ruling when remitting 1918 dues and please note, when possible, the station at which these members are located.

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### USURPERS.

At present writing 641 of our members have accepted commissions in the Medical Reserve Corp. Some 300 have received their orders and are on active duty either in training camps or "overseas;" the remainder are holding themselves ready and will enter active service as soon as they receive their call. Splendid indeed has been the response and we are proud that these volunteers have maintained the profession's loyalty in Michigan.

As a Society we have pledged these men our organizational support, assured them that their dependents would be under our fraternal protection and that on their return home we would lend our aid in rehabilitating their practices. This brings to the point we desire to mark.

In our larger cities where greater numbers of our members have enlisted and departed for service there is being noted a gradually increasing influx of doctors from outlying districts. This movement cannot be interpreted in any other way but that there are some who are selfishly grasping opportunities occasioned by the war, for the purpose of establishing themselves and building up a practice in cities. They are taking advantage of the absence of established men and are usurping their fields of activity and hope to maintain such practices as they may acquire when peace is declared.

We wish to discourage any such activities and while this movement is not extensive we desire to discourage its becoming so. At a meeting of the State Defense Committee in Detroit in November this matter was discussed and the expression of the entire committee was that anyone who utilizes such an opportunity for selfish purposes merits naught but condemnation and disapproval of his acts.

Temporarily one may become fairly busy on entering such new fields of work but it will be but for the period of the war. Upon the return of the man who went forth to army duty his former patients will recognize his patriotic service to his country and will reward him by

their re-enlisting as his patrons. Furthermore the State Society proposes to aid him in the re-establishment of his practice. We are hopeful that but few instances will arise that will require the exposure of usurpers. If you are eager for a change of location we recommend enlistment in the Medical Reserve Corp but if this does not appeal to you, stay where you are until our soldier members return.

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### THREATENED SUIT.

The proper procedure in case of suit or threat of suit has been so often spoken of in these columns that it would seem unnecessary to allude to it again, were it not for the fact that every few weeks we find some member doing the wrong thing. Each member when first apprehensive of trouble is asked to notify the Chairmen of the Medico-Legal Committee at once. Steps can then be immediately taken to enter appearance from Detroit, without any extra expense therefor, and the best attorney for local aid be deliberately selected. This is a matter of the utmost importance for we have at our disposal the means of a far wiser choice of local attorney than can any member have. He usually selects some friend or patient who may or may not have the special knowledge of law which he needs for his defense.

A case in point has just arisen where the first notification to our general attorneys or myself came from an attorney who made a special trip of several hundred miles to Detroit when a letter from the defendant doctor would have accomplished just as much. In another instance a suit was tried and lost by an incompetent attorney, before we were notified at all and we spent hundreds of dollars trying, futilely, to undo the harm done at the first trial. Even here in Wayne county, where nearly every year a medico-legal evening is given, a man recently asked aid for the first time, when his case was just about reaching trial. He said he did not know that free defense was at his command.

If we had untold wealth at our disposal we might not care if the Medico-Legal Fund was now and then wasted but with only *one dollar per year* from each member, we must handle this money in the most economical way possible, and it makes our motor heat up to see a single dollar fail to go as far as it should. Some day soon, we are going to be arbitrary enough to refuse defense to the man who applies at the

eleventh hour. There is a member of this Committee in each county who should be able to tell you what to do. In case he is a new member and has not learned his duties a letter to the Chairman or to the State Secretary will bring the desired information by return mail.

To summarize, consult your local medico-legal member, write at once to the Chairman of the Medico-Legal Committee in Detroit, sending declaration and facts if suit has been begun. Do not engage a local attorney without approval and consent of our general attorneys. Give this matter as much thought as you would have to were it an insurance company instead of the Medico-Legal Committee looking after your protection.

F. B. TIBBALS.

### INDEMNITY INSURANCE.

In our October issue we published on these pages some of the protection features offered by a certain insurance company to physicians threatened or sued for malpractice. That was done in compliance with a business policy of making editorial comment on the commencement of an advertising contract. Since the appearance of that editorial we understand that considerable activity has become manifested and unwarranted claims have been made for one company and derogatory claims advanced against another.

For many years we have carried in our advertising pages the advertisement of the Medical Protective Company of Fort Wayne. The fact that we have done so is certification that the Company is solvent, just in its business dealings and fulfills satisfactorily its every obligation. If that were not a fact the ad would not be permitted for we publish only honest advertisements from honest advertisers.

We have yet to learn of an instance wherein the Fort Wayne company has repudiated its contract or failed to fulfill its obligations. Financially the company is solvent with assets of over \$423,000 on October 1st, 1917. Its policy is brief but clear in agreeing to defend and indemnify any claim or suit, the providing of legal counsel, no limit of cost of defense and payment of indemnity up to \$15,000 during each year their policy is in force.

We are also able to state that the Fort Wayne company has in numerous instances co-operated with our State Medical Defense Committee and borne at times all the expense of trial and at all times have exhibited a willingness to lend

its every facility to perfect an effective defense. In brief the Fort Wayne company in every respect merits implicit confidence and its policy holders are assured that they possess reliable protection.

These statements are here set forth in the interest of fair play and to enlighten our members with reliable facts. It is then up to each member to determine what policy shall protect him and to the company's agents to sell him this protection.

### THE STATE COMMITTEE OF NATIONAL DEFENSE (MEDICAL SECTION).

October 17, 1917.

Dr. Andrew P. Biddle, 938 D. Whitney Bldg.,  
Detroit, Michigan.

Dear Doctor Biddle:

Your circular letter, signed by you as Chairman of the Auxiliary Medical Defense Committee of Wayne Co., Michigan, is distinctly obnoxious and unwelcome. I take it to be an effrontery of no small proportion.

Our Government is in possession of all necessary data concerning my affairs—and also of your affairs.

When the time comes, that the Government must have my services, it will readily obtain it through the Selective Service Act. The Government will also give me an opportunity to claim an exemption from military duty, just as it does in the case of the draftsman, the barber, the baker and the plumber.

Why should I be discriminated against? There will be no discrimination, as far as personal rights are concerned.

If I should be so situated that my family might become a public charge, it certainly would be wiser to keep me at home.

This will be ascertained by a properly authorized local board and not an officious quasi-official committee, such as you represent.

Furthermore, if the inquiries on the reverse side of the blank, are merely to ascertain my probable income and other sources of income, I am heartily glad to refer you to the Collector of Internal Revenue, Hon. J. J. Brady, who enlightens inquisitive people on that subject.

This might be a satisfactory method of arriving at an estimate of what my contribution, per month, should be to the Patriotic Fund, which, by the way is a gigantic imposition on the good nature of the medical man, and is open to a good deal of argument.

Don't get excited, doctor, there are still some medical men left, who will allow Democracy to be safe. Cajolery and bunk accomplish nothing in the long run.

Yours very truly,

A. G. H.

By virtue of my office as President of the Michigan State Medical Society I am a member of the State Committee of National Defense



(Medical Section) and by appointment of the State Chairman (Major Reuben Peterson, Ann Arbor, Michigan), Chairman of the Auxiliary Medical Defense Committee of Wayne County. As Chairman of the latter Committee my signature is attached to a circular letter sent to the members of the Wayne County Medical Society not now commissioned in the Medical Reserve Corps, U. S. Army, and referred to in the Doctor's letter quoted above. This is in explanation as to the reason I have the honor to serve on the committee. The office was not sought, but the responsibilities of the Committee are clear and will not be shirked.

The letter is given publicity because of the apparent spirit in which it was written, which spirit in a minor degree seems to be prevalent, though to one who has given the matter thought must be due either to ignorance or non-appreciation of the increasing seriousness of the times in this national crisis.

The State Committee of National Defense (Medical Section) is a committee created by the Surgeon-General's Office, U. S. Army, and acts under its instructions. While it has no mandatory powers and acts only in an advisory capacity, it is a part of the machinery of the Government empowered to secure data necessary to the latter in the prosecution of the war. The personal element enters nowhere into its composition or its actions.

The Government desires to profit as far as possible by its own experiences and by the experiences and mistakes of its allies. For this reason it is one of the present functions of this Committee to classify as clearly as possible the status of every physician in Michigan under the age of 55 years who has not yet been commissioned in the Medical Officers' Reserve Corps; first that the delay incident to the commissioning of the first 600 may not be repeated; secondly that the Government may have the list of those who, though desirous of offering their services, for reason of conditions in their locality, be this a lack of physicians, an attachment to a hospital, or a large manufacturing plant necessary to the Government, to a railroad or to a mine, or to the teaching staff of a University or a college, or because of dependents at home should not go. If the Government needs the service of say 500 more physicians from this State, the names of those eligible and desirable must be furnished at once by this Committee.

The object of an estimate of the physician's resources and of those dependent upon him is

to know first if it be necessary to excuse him from service for the present at least and secondly, if he be commissioned to know to what extent the Patriotic Committee of the various county medical societies of the State may be of assistance to his family or dependents.

Be it to their everlasting credit that the first call for medical men to offer their services to the Government in this great emergency was met by an instant response, Michigan giving up more than her quota. But this is only the beginning. Thousands more will be needed and within a few months. The whole profession must now consider itself part of the vast machinery of the Government, ready at any moment to answer its call and its needs. But let this be done in an orderly and efficient manner, that the needs of the Government and the needs of the civil population, which must furnish the sinews of war may be equally met as far as possible.

The Committee has no apologies to offer to the writer of the letter. Its creation, as has been said, is not of its own volition. It believes its services has been of benefit alike to the Government and to the profession, but that its work has only begun; and it calls upon every member for unqualified support and unquestioned loyal co-operation.

The Medical Profession has never failed in a national crisis and it will not fail in this. The keynote of its creed is service, service to its Government, service to its people, service to humanity. I believe the profession of the State of Michigan will, as ever, be true to its glorious traditions and stand by the President of the United States; and, incidentally, understand the action of the State Committee of National Defense.

ANDREW P. BIDDLE.

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*Hepatico Tablets.*—The Council on Pharmacy and Chemistry reports that Hepatico Tablets (David Laboratories, Inc.) are claimed to "contain a combination of bile salts, pepsin, pancreatin, ext. nux vomica and cascara," and that in their exploitation the same therapeutic nonsense is made use of as that used in connection with two preparations of similar claimed composition, namely, Veracolate and Taurocol, previously reported on by the Council. The Council declares the therapeutic claims made for Hepatico Tablets unwarranted, the name objectionable and the combination of ingredients irrational. (*Jour. A.M.A.*, Oct. 20, 1917, p. 1374).

## Editorial Comments

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More than ever is it incumbent upon members to delve deeper in their medical readings, extend their investigations, compile their experiences and record the results attained. We must become greater producers and scientific investigation and research must receive greater concentrated thought with the end in view of continuing the development of medicine and surgery in order that the war period may witness advancement in every line of medical activity and stagnation or retrogression be not characteristic of the present period in medical history.

In former periods of war the tendency has been toward the arrestment of scientific progress and development. The tendency was to discourage research and study with the result that it required years to reinstate that spirit of quest and progress. We should seek to avoid such a tendency during this war.

To accomplish this everyone at home must "dig in," read, experiment, observe, record and acquire the habit of intensified investigation. He must then publish his results and contribute his part to the literature. We urge a greater manifestation of the spirit of studious investigation and production.

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"Grossly exaggerated," replied Mark Twain on receiving a report of his death. Likewise was the report of the injuries sustained by the Editor on November Fifth.

While driving in a seven passenger car to make his morning hospital rounds, he was struck in the rear of his car by a fast driven car. This resulted in completely turning our car turtle and pinning us underneath with one arm caught under one side of the body of the car and having been thrown sidewise in the seat the steering wheel bore down on the left side of the chest. The collapse of the top and windshield allowed the car to settle thereby impaling the left leg but breaking of the steering wheel prevented extensive crushing of the chest or possible fatal injuries. Passers-by hastened to our assistance and the car with four wheels in the air, and engine running was promptly turned on its side so freeing us from this impinging weight.

A witness of the accident had promptly summoned an ambulance and inside of ten minutes we were in the hospital. Here the inventory revealed; two fractured ribs, lacerated wounds of two fingers, numerous body contusions and first degree acid burns of the face from the acid in the storage battery. The cessation of respiration while pinned under, the chest injuries and the somewhat extensive contusions caused a moderate degree of shock which disappeared in a few hours. A fatality was thus narrowly escaped and while the bodily injuries, especially the contusions and muscle wrenchings, were extremely painful, no permanent results are

being experienced. Moral: Watch out for the rear as well as the front and side for in this day of speed you become vulnerable at all angles.

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The minutes of the Special Meeting of the Council will be found elsewhere in this issue. Our members are urged to read this record. County Secretaries are urged to observe the provision made for the reducing of the dues of members in active service.

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He who attended the meetings and clinics of the Clinical Congress of Surgeons of America that were held in Chicago during the last of October gained a new insight in the progress of modern surgery. Likewise was the impression gained of the magnitude of the war, the stupendous forces and energies required, the important part that is being assumed by our profession and the need that exists for additional medical officers.

There is one feature of these meetings that is becoming increasingly annoying and monotonous in the extreme every year. Splendid programs are prepared for the evening sessions and speakers of international fame and achievement are announced. Men are attracted by these features and are eager indeed to listen to them—but what happens? Each year valuable time is wasted by a stereotyped procession of preliminary speakers who take delight and abase themselves in idle ramblings on this or that subject wholly unrelated to the session and of no interest to the audience. It is a utilization of valuable time for self advertisement. Please, gentlemen, take a back seat for awhile and do not continue to persistently thrust yourself upon us unless you can do so to the profit of all. We know your greatness, your prominence and ability but please give us a rest for you weary us.

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He who thinks the dawn of peace is appearing in the eastern horizon should have heard Sir Monihan's address in Chicago as well as those of others who have been to the front. Sir Monihan said in answer to the question frequently put to him: "When will the war end?" "When America sends millions of her men 'Over-Seas.' When these men have been subjected to every atrocity that German ingenuity can subject them to. When they have suffered every discomfort and their hearts have been seared. When there return to America thousands of wrecks of human beings who went forth as able men. When we welcome home to bury thousands of our dead. When we find, as England has found, the need of every man of military age to offer his services and who is prepared to surrender his life to his country—*then and not till then may we assume that our war has begun.*"



The Metropolitan Life Insurance Company invites physicians, public health and social workers to make use of its valuable collection of mortality statistics.

These statistics present the principal causes of death among white and colored wage-earners in the United States and Canada. The material covers over ten million individuals for each of the six years, 1911 to 1916. Death rates are available for each race, by sex and by age period.

The Company hopes in this way to aid in the

study of disease and disability and research. By offering these statistics to the medical profession and to public health and social workers, the Company expresses also its appreciation of the co-operation which it has received from physicians and others who have replied to inquiries and have given detailed information in thousands of cases. This assistance has helped to make the statistics more accurate and valuable.

All inquiries should be addressed to Statistical Bureau, Metropolitan Life Insurance Company, 1 Madison avenue, New York City.

## Special Meeting of the Council, held in Grand Rapids November 7, 1917

The Council of the Michigan State Medical Society met in Special Session in Grand Rapids on Nov. 7th, 1917, pursuant to call issued by the Chairman.

The following Councilors were present: Chairman, W. T. Dodge; President, A. P. Biddle, S. K. Church, A. H. Rockwell, W. J. DuBois, A. M. Hume, W. J. Kay, B. H. McMullen, F. C. Witter and C. T. Southworth, Dr. F. B. Tibbals, Chairman Legal Defense Committee; Dr. Reuben Peterson, Chairman State War Defense Committee, and the Secretary, Dr. F. C. Warnshuis.

The Chairman in calling the meeting to order stated the object of the meeting and called upon the Secretary who rendered the following report:

### SECRETARY'S REPORT.

The exigencies of this "World War" have occasioned expedient readjustments of policy and methods in practically every line of human activity and endeavor. Practices formerly observed have been readjusted, established precedents that have been rules of procedure for years have been revoked or revamped, policies have been annulled and so along the entire line of civic, commercial and social life we are witnessing new conditions and environments which are being accepted without murmur and to which we are adapting our existences.

It would be superfluous for me to review the diplomatic and governmental principles and policies that have lead to this chaotic and revolutionary state of cosmic existence. It will ever be to the lasting honor of the government to which we pledge our loyal allegiance that the war we are now engaged in witnessed our

participation on no other basis than a universal desire to make the world safe for democracy and through that broad, humanitarian spirit that manifests itself in the expression of extending the hand of fellowship and aid to the fellow man, the sister nation suffering under the atrocities perpetrated by a canny and inhuman tyrant.

We would indeed be bereft of all honor and all right to sit in the Councils of Nations had we but sat idly by murmuring "Peace, Peace," when there is and can be no peace until the selfish aspirations, the inhuman acts, the lawlessness from an international point of view, the depravity and barbarism of a people who in their blind submission to the leadership of certain cults and clans are pursuing a conflict, if successful, that would cause the world to retrograde to a state of prehistoric barbarism subjecting its people to bow under the tyranny of crowned heads, princes and principalities and annul all that the ages have wrought.

Our cause, our allies, our martial array requires, demands no excuse nor is there necessity for pleading to justify the part we have taken and the expressed purposes that inspire that participation in which we are now engaged and to which we loyally pledge our lives, our energies, our wealth, our homes, yes our very all to permanently and for all time conquer these paranoiac degenerates who in their delusion, aspire to dictate to and subject all other nations and peoples at a conquering price that is beyond human conception.

As these readjustments become palpable in civic life and to which we as a nation as well as individuals are adapting ourselves and sub-

scribing our unlimited support and doing not "our Bit" but "our Best," so too must we as a professional organization, readjust our affairs, our policies and our activities and to that end is the purpose of this Special Meeting.

As your executive officer there has become apparent to me the need of arriving at certain new policies and methods of administrative procedures involving the annulment of erstwhile practices and precedents and the establishment of new rules to govern our future welfare and endeavor. The problems presenting are of greater importance than one realizes at first thought for they involve our very existence and as their solution is imperative they should receive the consideration of the Council in order that the needed instruction and authority to execute your work and maintain the organizational strength and influence of our Society may be given.

What then are these problems?

1. The last available record imparts that some 621 of our members have received commissions and are either on active duty or subject to call at any time. What is the status in which these men shall be held in so far as local, state and national membership is concerned? Shall their state dues be remitted? Shall the county societies and the members not in active service at home be asked to contribute the payment of the state dues to the extent of \$2.50 per member, thereby omitting the Defense Protection? Or shall no dues be demanded?

2. If no dues are to be required what shall be done about sending them the *Journal*? Shall the *Journal* be sent to these members or will it be discontinued? If it is sent to them in what manner will the *Journal* deficit that will accrue be protected?

3. If the *Journal* is discontinued it will be imperative to readjust our advertising rates because it is at once apparent that advertising rates which are based upon circulation cannot be maintained if our circulation falls from 2500 to 1500 as it will eventually, in the course of a year, as more men are being called into the service.

4. At our Special Meeting at Battle Creek a special assessment was spread and first amount designated by the Council was \$5.00 per member to create a Patriotic Fund to render such assistance as might be determined imperative for the benefit of the dependents of members in active service. I have endeavored to collect this assessment and have had remitted to me the sum of \$2,170.00 from twenty-two county

societies. There is unremitted the sum of \$9,910.00. There is apparent a disinclination on the part of many of our county societies to pay this assessment. Why I cannot state unless it is that they feel that they will in and among themselves protect the interests of their enlisted members without statewide aid.

In assuming that attitude sight is lost of the fact that we are a state wide organization limited to no particular locality. The doctor in the lonely four corners or hamlet is as much a member as he who practices in the metropolis and the doctor in the scarcely populated counties has been given our open pledge and assurance that as a member of our state organization we will protect, conserve and guard his interests the same as the metropolitan physician. In societies having a membership of 50 to 300 it is simple and no burden for the men remaining at home to create the necessary funds to render fraternal assistance to their members who are in service. While on the other hand in counties having a membership of six to twelve men of whom two enter active service it is unjust and an imposition to ask the remaining four or ten men to contribute and provide a fund for the meeting of emergencies that may confront their dependents. Yet we have solemnly pledged to every member our organizational strength and individual support and to do so we must employ the support of our statewide membership. Sight must not be lost of this fact and certainly it is unbecoming and revoking our Society pledge if certain groups withdraw into themselves and say we will concern ourselves only with our own men and ignore the fraternal obligations we have registered to all our members. We must ever be mindful of the broad existence of our Society and the duty we owe to every member no matter where he is located—he is our fellow in every sense.

To keep this pledge inviolate this assessment must be remitted in full and such action taken as will secure support by every component organization.

I ask your instruction as to how this may be best accomplished.

5. The administration of this Patriotic Fund demands the establishment of definite rules. We are receiving requests for assistance that are varied in their nature and amount. It is perceived that unless definite rules as to the extent and nature of the aid that is to be rendered is determined much dissatisfaction will arise and claims of favoritism and partiality will result. The Council should definite-



ly determine and outline the nature and extent of the benefits to be disbursed in order that your Secretary may have a hard and fast rule to govern his activity.

6. The problems of the enlisted man and he who for various reasons or circumstances continues his civic practices at home is of grave concern and likewise merits serious deliberation. We glory in the man who dons his uniform and relinquishing all, devotes his all to his country and his country's need. We honor him rightly and our plaudits and commendation are sincere. We bid him "Good Bye, Good Luck and God Bless You" with heartfelt sincerity and ever stand ready to welcome his return and proffer him our every support. We are glad, yes eager and willing, to ascribe to him all the tribute, adulation and honor it is within our power to extend. We are thankful and filled with pride because our ranks are producing thousands of such men who we will ever honor. But what of the doctor who can't go? Who, by reason of age, physical defects, dependents, civic or corporation duties and obligations, or, by reason of community needs, must stay at home. He is not a "Slacker." In his breast there beats a heart of fervid loyalty equal if not exceeding the patriotic heart throbs of the man in uniform. He fain would go and the inability to go causes him many hours of sadness and regret. The circumstances preventing his enlistment are beyond his human control but his patriotic zeal is beyond question. His, the duty to remain and do his duty in the civic world without glamour, glory or demonstration. Unsung are his praises though the part he is playing is of equal importance. He merits our consideration and recognition.

This has been impressed upon me recently since the organization of a new movement to establish a body of men who will be openly exonerated from enlistment by reason of physical or age disqualification and who will have a distinguishing emblem. All others are to be designated as "Slackers" unless they are commissioned into service.

Commendable as may be the principles that inspired such an organization, the enthusiasm that engenders its existence must not be permitted to warp our judgment and cause us to be unmindful that these other men are rendering services of equal importance and as essential to carry on this war to a successful termination.

We have as members Doctors who are affiliated in a professional capacity with corporations, insurance organizations, railways, depart-

ments of health and city and civic administrative offices. We have members whose every station in life and responsibilities of home and dependents make it impossible to sever their present connections. These men are of an age and of ability that would make them desirable and valuable military officers yet who by reason of these established affiliations cannot enter upon a military service. You may ask, "Why don't they resign and let someone else older or who is unfit for army work perform their duties?" If that were possible these members would gladly do so but their years of training, their years of experience in these particular lines of work cannot be transferred to one wholly unfamiliar with the multitude details of their duties. Their responsibilities cannot be transferred to the inexperienced without the shattering and disrupting of the work and efficiency of the corporation or industry with which they are associated.

Officials of the government have informed us that for every man in the field there are needed ten men at home to provide the sinews of war. Our President has said that our railways are of primal importance. Everywhere skilled labor and its efficiency is of greatest concern and its conservation is receiving the closest attention. These members are being looked up to, to safe guard labor's health, to prevent accidents and when accidents do occur to cause the injured employee to receive such care as will most promptly return him to work in the shortest possible time, with the least permanent defects. It must be conceded that these members who hold these trusts are serving our cause commendably. The men who are safe guarding civic health are likewise performing their part. Medical Directors of insurance companies do also perform services to the public and their country. So does the man who has dependent upon him, those who cannot be deprived of the necessities of life.

Gentlemen, to broadly insinuate that such men are "Slackers" is stating a grievous untruth. To attempt by organized effort to ostracize them and direct the finger of public censorship toward them would be committing a grave injustice. These men are heroically performing their allotted tasks and stoically, without glamour or show, contribute their part to our nation's cause. We dare not, we must not permit any travesty against them. If needs be our organizational influence must manifest itself in their behalf. We must prevent militarism from ruthlessly exercising its power

unwisely to attempt or even insinuate that those without its pale merit naught but scorn. We must be ever mindful that this war requires more than military men and that the man at home is also doing his part to achieve the ends of peace and victory.

It becomes the duty of this Society to safeguard the reputations of its members and to circumvent slanderous attacks against them. To that end I would recommend that the Council appoint a Special Committee who shall report on this question at its January meeting.

7. I confess that I am still in doubt as to the wisdom that determined the postponement of our Annual Meeting. I am inclined to the opinion that that action has contributed to producing a state that is manifesting itself in organizational lethargy. Possibly I am too pessimistic, nevertheless there is being constantly presented to me evidence of organizational decline or stagnation. More and more do I perceive the tendency of certain groups, certain localities drawing into and unto themselves, becoming among themselves self sufficient and casting aside, ignoring or protesting against organizational co-operative effort that is broad in effort and not self centered. There is a waning of unity of action and a lessening of interest in our fellow practitioner who is without the pale of our immediate locality. There is an unmindfulness of the broad scope and obligation that we owe to every member of our profession within the boundaries of our state. Our State Society is our parent but we are drifting away and its component units are neglecting their filial duties. These facts strike at the fundamentals of our existence and are of such grave concern that it becomes imperative that you pursue a course of investigation and determine upon a reconstructive procedure that will circumvent any such disintegration.

There is a nation wide tendency in this respect. I, for one, deplore that ambitious individuals have seen fit and been apparently successful in causing the establishment of a group that is being recognized by our national officials in all matters of this war that pertain to medicine, surgery and sanitation. I deplore exceedingly that our parent organization, the A.M.A., powerful as it is, equipped as it is and headed by trained officials, should have been thus ignored. I am indeed chagrined that the ambitions of a few have been realized while we stood idly by. Possibly the fault lies at our

very doors but nevertheless the state of affairs exist to our organizational chagrin.

However, the duty lies before us, the task is ours, to make our State Society the head of all medical activity in Michigan and to accomplish that purpose it is incumbent that an awakening be achieved and new enthusiasm engendered.

To that end I would recommend that the Council determine a definite plan of activity and I proffer the following suggestions for your consideration:

(a) That each Councilor District hold a one or two days session some time during the next sixty days. That at these meetings certain other Councilors as may be selected shall attend such sessions and address those assembled on organizational activity. That our President's expenses in attending these meetings be defrayed by our state funds.

(b) That the Council arrange a plan whereby there will be held in the early spring a session in two localities of the state that shall be clinical in its nature and shall provide for an evening devoted to organizational purposes.

(c) That the Council's Committee on County Societies shall canvass each component Society and secure an expression of opinion as to whether we shall hold an annual meeting in May, 1918, and to report on their canvass at the January Council Meeting.

I am conscious, gentlemen, that I have occupied considerable time in presenting to you these problems. Much more might have been pertinently injected in this report but I have purposely sought to set forth only general conditions. In conversation with a number of our members I have realized the importance of these problems and on presentation to our Chairman and President this Special Meeting was deemed expedient. I await your instructions in these matters.

F. C. WARNSHUIS, Secretary-Editor.

After some general discussion it was moved by Dr. Hume, supported by Dr. Southworth that a committee of three be appointed to consider the several problems set forth by the Secretary and to formulate such recommendations as they may deem expedient. Carried.

The Chairman appointed Drs. McMullen, Hume and Southworth. Pending the report of this Committee a recess was taken.

The Committee having its report formulated the Council came to order and the Chairman



of the Committee, Dr. McMullen, presented the following recommendations:

#### COMMITTEE REPORT.

1. Your committee would recommend that Patriotic Relief Funds be paid out only on recommendation of the Patriotic Committee of the County Society to which the applicant belongs. Further, that the aggregate of such payments shall not exceed the amount of money already contributed to the State Patriotic Fund by the County Society from which the request emanates.

2. We further recommend remission of the Defense and Membership dues of each member in active service and that county societies remit the *Journal* subscription of \$1.50 for each member in active service in order that the *Journal* may be sent to him and so keep that member in touch with the organizational work that is being pursued. It being understood that all members whose dues shall be so remitted shall retain all the privileges and benefits of membership and the protection of the Medico-Legal Defense Committee of this Society and be considered as being members in good standing.

B. H. McMULLEN,  
CHAS T. SOUTHWORTH,  
ARTHUR M. HUME.

After considerable discussion on motion of Dr. McMullen supported by Dr. Hume the report was adopted without a dissenting vote.

#### ANNUAL MEETING.

The question of time and place for the holding of the next annual meeting was then discussed. It was the general opinion that the annual meeting be held at an early date. President Biddle stated it would be impossible to perfect a program inside of sixty days.

On motion of Dr. Hume supported by Dr. Church it was moved that the time and place of holding the next annual meeting be referred to President Biddle with full authority to select place of meeting and designation of dates on which it is to be held. Carried.

The Secretary read the following communication:

Dr. F. C. Warnshuis, Secretary,  
Michigan State Medical Society.

Dear Dr. Warnshuis:

The enclosed report was transmitted to the members of the House of Delegates. The report is self-explanatory; it, with the resolutions therein contained, has been adopted by a postal vote.

After consulting with Lt. Col. Johnson, the committee sought and established a practical basis on which the work of the committee will be done in thorough co-operation with a special committee representing the Committee on State activities of the General Medical Board of the Advisory Commission of the Council of National Defense.

It is possible that a meeting of the secretaries of the state associations will be called in Chicago for counsel and advice concerning the matter as it relates to each individual state. For this reason, I am requested to ask you, in the way of preparedness, to advise with those members of the Committee on State Activities of the General Medical Board in your state who may be available, as well as with other members of your state association. The ultimate object is to nominate men who are qualified to serve on these boards. At the present time, it is understood that each board will consist of an internist, a surgeon, an eye, ear, nose and throat man, a neurologist, and a laboratory man, and that each board will have available the necessary laboratory facilities. In addition information may be needed relative to the geographic conditions in your state on which to determine the territory to be covered by each board. This territory may be larger or smaller than the present appeal board districts. Further, it will be necessary to have information as to laboratory equipment in different centers on your state. As I have said, this is tentative.

Should the conference of state secretaries be called, the American Medical Association will pay your traveling expenses.

If you cannot attend the conference, if it is called, kindly deputize someone who has a full knowledge of the profession and the conditions in your state to attend the meeting and act for you. If the meeting of state secretaries is called, you will be advised by telegraph.

Very truly yours,  
ALEX R. CRAIG, Secretary.

Chicago, Oct. 19, 1917.

To the Members of the House of Delegates of the American Medical Association:

Under date of Oct. 13, 1917, Hugh S. Johnson, Lt. Col., Judge Advocate, Executive Officer of the Provost Marshal General, acting for the President of the United States and War Department, addressed a letter to the American Medical Association from which we quote:

"We need the active and vigorous cooperation of the American Medical Association. We need the promptest and most thorough action in this regard. Will you not call together a sufficient number of your executive council to authorize this cooperation by the Association, and to consider a definite and concrete proposition which can be presented here, and upon which we can act?"

Specifically, the cooperation desired of the Association is set forth in the following:

"It is planned to establish Medical Advisory Boards, not necessarily integrated with the territorial jurisdiction of either Local or District Boards, but having headquarters with sufficient apparatus and conveniences so located as to be accessible to

Boards in the portion of the state in which the Advisory Boards are situated. Any case in which the local examining physician has held the registrant disqualified for service (unless the disqualification is obvious) or in which the local physician is in doubt, or in which the registrant feels aggrieved by the decision of the local physician, or where the Local Board or the Government Appeals Agent desires to appeal the findings of the local physician, is to be sent to such Medical Advisory Board for an exhaustive (medical) examination upon which the Local Board can proceed to a final determination."

These Medical Advisory Boards will consist of physicians selected for their ability to make thorough and complete physical and mental examinations. This means that the Boards shall be composed of specialists competent to make such laboratory and other examinations as may be required. This matter was of such importance and the urgency was so great that, in accordance with the spirit of the recommendation of the Reference Committee on Report of Officers adopted by the House of Delegates in June, 1917, i. e.:

"We further suggest to the House of Delegates that it formally and officially offer to the Government, through adoption of this recommendation, the services and facilities of the American Medical Association for such assistance as may be in its power to render hereafter."

The Board of Trustees, on Oct. 19, 1917, in special session assembled for the purpose of considering the matter, all the members being present, unanimously adopted the following resolutions:

*Resolved*, That the Board of Trustees for and on behalf of the American Medical Association accept the invitation to cooperate with the Provost Marshal General in the matter presented in the letter of Lieut. Col. Hugh S. Johnson under date of Oct. 13, 1917;

*Resolved*, That a committee of three be and hereby is appointed with full power to act in conjunction with the Provost Marshal General in the premises.

The following committee was appointed: M. L. Harris, Secretary Board of Trustees; Huber Work, Chairman House of Delegates, and E. J. McKnight, Member of the Board of Trustees.

Respectfully submitted, by order of the Board of Trustees,

M. L. HARRIS, Secretary Board of Trustees.

On motion of Dr. McMullen, supported by Dr. Witter, the plans outlined in the communication were endorsed and the Secretary authorized to attend such a conference when called. Carried.

On motion of Dr. Church, supported by Dr. DuBois, that the January meeting of the Council be held at the place designated for the holding of the Annual Meeting and if no meeting is to be held that the Council meet in regular session in Detroit. Carried.

The Council session was then adjourned.

W. T. DODGE, Chairman.

F. C. WARNSHUIS, Secretary.

## Correspondence

Baltimore, Md., Nov. 11, 1917.

Memorandum. To Editors of Medical Journals in the United States.

It is of the utmost importance that the medical profession throughout the country be kept informed in regard to the activities of the Surgeon General's Office, the Medical Section of the National Council of Defense in Washington, and the work of the State Committees.

There should be no difficulty in obtaining this information by writing directly for it.

About 14,000 are commissioned and 7,000 are in the process of being commissioned.

Twenty-one thousand medical officers are about sufficient for any army of 2,000,000 men.

The indications are that we will need a much larger army, and the medical profession of this country will be tested to its utmost capacity.

At a recent meeting in Chicago of the State Committees of the National Council of Defense it was decided to petition Congress to create a Reserve Medical Officers' Reserve Corps. When this is created, every qualified physician at any age will be given the opportunity and honor to volunteer his services and be enrolled. After this every physician will be in a position to either wear the insignia of honor of the Reserve Medical Officers' Reserve Corps, or the uniform of active service in the Medical Officers' Reserve Corps.

From the new Reserve Medical Officers' Reserve Corps the Surgeon General will be able to select medical officers as they are required for service in France or at home.

The present great problems are:

The training of physicians in civil practice for military duty;

The protection of the army in training in this country from venereal infection.

The future great problem, when our wounded begin to return to this country, will be the reconstruction and re-education of the crippled soldiers.

The great and only necessity of the present is the successful carrying on of this war.

The medical journals of this country should do all in their power to keep the profession properly informed and to stimulate them for this great endeavor.

JOSEPH COLT BLOODGOOD,

Chairman Committee on Preparedness,  
Southern Medical Association.

Lansing, Nov. 12, 1917.

Dear Doctor:

Venereal diseases have been declared, by the Michigan State Board of Health, to be dangerous communicable diseases and, as such, must be reported to this board.

The authorities at Camp Custer have reported to us that so many of the men coming there from the draft boards have gonorrhea or syphilis that we



must do something to protect these men before they are drafted as well as after.

Following a conference with Governor Sleeper and the War Board, who have generously supplied the means, the State Board of Health have inaugurated the following plan:

Each physician must report all cases of gonorrhea or syphilis coming to his attention, together with the source of infection. There is a psychological moment when this information will be obtainable—when the patient first discovers that he is infected and is disgusted. With this information, the State Board of Health will apprehend the person transmitted the disease, place them in a hospital and treat them at state expense.

Your confidence in making these reports will not be violated; no one will know who makes these reports, as they are mailed by the physician directly to this office and not through the local Health Office, as is done with other reports.

Because of the interest the State and National governments have taken in this matter, the physician must report the cases or prosecutions will surely follow.

We have a plan started through which the druggist will stop prescribing for these cases.

Trusting that you are willing to do your bit in assisting us in this work, we are,

R. M. OLIN, Secretary.

(We are delighted with the opportunity to print the following letter from Lt. Louis Hirschman, not only because it is full of entertaining news, but also because the writer, who has been critically ill, has now recovered his health, thus earning the gratitude of his very many friends).\*

Somewhere in France,  
September 30, 1917.

Dr. John N. Bell, David Whitney Bldg., Detroit:

Dear John—It is now over three months since we went on active duty, and this is really the first time that I have had an opportunity to write you as I promised. Our trip on the Mongolia, according to all the various newspaper accounts, must have startled the natives. There is no use of my trying to give you the facts, because no two stories are alike. Suffice it to say, however, after a wonderfully pleasant and smooth trip, which was more like a private yachting party than a unit going to war, we hove in sight of the second most beautiful sight in the world—the coast of England (the most beautiful sight in the world will be the Statue of Liberty). Everything that was done for us was done with wonderful efficiency and dispatch. We had a special train through England, which took us through most wonderful green fields outlined by old hedges, the country-side being dotted here and there with old thatched cottages, castles, and old Roman ruins. On our arrival at our embarkation port we went on board a hospital ship, where a hot meal was awaiting us, and we all soon were off to dreanland. We met the Massachusetts General Unit on this ship and traveled with them to France. On our arrival at a famous French seaport the men were marched to

a rest camp, the nurses to an old convent, and the officers distributed among several hotels. Some hotels! The only thing they knew was how to soak the Americans. The first day we arrived I thought I would try a little of my French on the chambermaid, and I asked her where I could procure a bath. She nodded her head vigorously as if she understood, and asked me whether I would like an English or French bath. I was somewhat startled at this question, and believing in "safety first," said I preferred an English bath. She returned in a few moments with a bottle of beer. I decided that my French would have to be improved before I tried any more on the natives. This was no worse, however, than Bill Spitzley. Bill is supposed to be an accomplished French conversationalist, and went into a cafe to order some melon. The waiter brought him a fish, which made me feel that after all my mistakes was no worse than his. I was detached from the unit at this time, and my special duties included checking up hospital stores for our unit and the others in France, and I was specially detailed to visit all the French and English hospitals in the district. I was furnished a motor car and chauffeur by the French government, and saw a great deal during the seven weeks I was stationed there. I am sorry censorship forbids my going into detail, but we will have many pleasant evenings around the rhum table relating our experiences somewhere in France. I next went to Paris, where I spent eight days visiting some of the famous clinics of the world in the daytime and some of the famous theatres of the half-world at night. There was considerable more of anatomical display at the latter than at the former. Have met a great many friends in the army, and had the good fortune to meet the Vaughan boys, Walter Manton, Holm of Lansing and Wile of Ann Arbor all on the same day. I also met some of my old Plattsburg associates. After leaving Paris I came on to this beautiful old city, and rejoined the unit, where I was welcomed like a prodigal son. Enough descriptive matter has been published in the papers about this old city, so we will not bore you with it, but will tell you something about the members of the unit and their personal progress. Major Angus McLean has developed a great fondness for the French officers, which is likewise reciprocated. He is spending a great deal of time studying wine culture and consumption, as well as viewing the priceless old specimens of French art. His common expression when he sees something real beautiful is, "Pom de terre." Torrey and McKean are at present visiting the English front. They are expected back in a day or two, and I fully expect to see Torrey bringing in the scalps of a half dozen Boches to add to his collection of hunting trophies. Hickey, believing that the X-ray job is the most sanctified of all specialties, has appropriated the chapel for his dark and devious purposes. Shannon, Pat O'Brien, Spitzley, Duncan, Campbell, Gruber and Gregory are making great advances in the study of games of chance. They show their patriotism by limiting their efforts to those games in which the national colors of France, England and the United States are most frequently displayed by means of little round discs of red, white and blue. Ford is bothered by the natives, who are con-

\*From Wayne County Medical Society War Bulletin.

stantly asking him for money, as they refuse to believe that he is not the famous millionaire from Detroit. Ernie Cullen's laugh has come into its own. We use it in the morning to awaken the members of the unit, in place of the bugle. Parmeter's greatest difficulty consists in acquiring a real French accent; he has two French teachers, one for conversation and another for accent, and he does persist in getting them mixed up. Bob Owen, besides his duties as laboratorian, is our mess officer, and recently is feeding us wonderfully well. In fact, so well that it makes us blush when we read the stories printed in American papers on the food shortage in France. Freddie Buesser makes the prettiest little officer of the day you can imagine. His happy smile as he salutes an imaginary American flag must be seen to be appreciated. Buesser is also our police officer, and he certainly is one of the finest. Dodds and Stirling are away at present on recruiting duty up on the French front, and La Ferte expects to go in a few days, while Larson is observing in a hospital at Lyon. Nineteen of our nurses are away on various detached duties, it being the policy of the government to have all of the members of the hospital unit acquire all the experience they can by visiting hospital organizations of the other allied armies. We have a fine old building, which accommodates 600 patients, and arrangements have been made to enlarge it to double that capacity. Our hospital is destined to be one of the most important of the U. S. A. hospitals in France, and we consider ourselves extremely fortunate in being situated as we are. We all enjoy receiving the Wayne County War Bulletin, and would be very glad to get personal messages from any of the members. We are a good long ways from home and not a day goes by but what we are reminiscing about things in the city where "life is worth living."

Yours very truly,

LOUIS J. HIRSCHMAN,  
Captain, M. R. C., U. S. A.

U. S. Base Hospital No. 17, Am. Ex. Force, France.

(We are under obligations to Mrs. P. M. Hickey for the privilege of printing the following letter from Major Hickey):

One never knows what is going on at home, as all the papers which we see are censored. Perhaps on the first page of the Herald one will see part of a column blank, cut out by the censor just before the paper was printed. We are having our first touch of cold weather, and it is very nasty. It rains every little while, and it feels raw and damp. I have a nice little stove in my sitting-room which makes it more comfortable. There are hardly any buildings here which have steam heat or furnaces. Most all of the buildings were built before steam was used for heating. Coal and wood are very dear. I am afraid that it will cost as much to heat my room as it does to heat our whole house. All the stoves are dinky little things built to economize fuel. There are many grates, but they all have little sheet iron fronts through which you run a little stovepipe from the stove, as a grate fire would be too expensive. I am wondering if the cold weather will diminish

the number of fleas. They seem to like the French air, and multiply on it.

Our mess at the hospital is very good and we are fortunate to have such good food. Many of the boys are away on observation trips and some will be back this week. Louis is still sick abed, but convalescing. Last week we were worrying about him, but he is now out of danger and will be sitting up in a few days. He has had a bad bronchitis and para-typhoid. The rest of the men have all been well.

The sewer connections for the hospital are being put in now, and the telephone service from one part to another is just installed. This makes it much more convenient. I have been very well—have not had a sick hour since leaving. I do a tonsil operation now and then, just to keep my hand in. Operated on young Mendelssohn this morning. Galvin looks very well and says he is getting on nicely.

Had a wonderful drive up one of the mountains yesterday to look at a tuberculosis hospital which might be available for us for a convalescent hospital. The road was so steep that the ambulance could only go up by keeping on lowest gear all the way. It was a very modern building, but rather small; but there was no limit to the view.

PRESTON.

P. S.—Had my first job as summary court officer, but let them all off pretty easy.

October 14, 1917.

I have just returned to my station from a week's detail at Colonel R——'s hospital at ———, and from a three days' trip to the front. The former was interesting, the latter exciting. We got to the front through the ingenuity of Major McLean, who obtained an ambulance from the authorities in Paris. Our party consisted of Majors McLean and Torrey, Captain Owen and myself. We left Paris in the morning and drove up to Soissons, going through Meaux and La Ferte. The latter town was of course of special interest to me. We crossed the Marne and all through that battle field, which is a maze of trenches and barbed wire. Here and there are graves decorated, and also large mounds where the bodies have been piled up and covered with dirt.

The smaller towns we passed through were razed to the ground, and I do not believe there were more than 50 per cent. of the buildings left even so high that we could not stand and look over the walls.

In the afternoon at Soissons I witnessed an aeroplane battle over the French lines. A Boche came over to attack an observation balloon which was anchored near us, and was immediately given battle by a French plane. Their antics remind you of birds which are chasing each other around. At times the planes were almost upside down. The two fighters were quickly joined by seven others, and in about five minutes the whole bunch disappeared over the Boche lines.

In the evening we had another taste of excitement, when a Boche flew over us. He didn't stay long, as the anti-aircraft guns opened on him from all angles. We could see the flash of the shells as they broke all about him, but he returned safely to his lines.



The following morning we went up to the lines to see what was doing. We climbed a ridge, where we could look down on the front. We did not stay long, however, as we were spotted and two shrapnel shells broke over our heads. It is rather a peculiar sensation to know that some one is taking such a lively interest in your affairs. Needless to say, our trip back was made in good time. McLean and Torrey became quite boyish and jumped trenches on the way back that we had to drag them over on the way up. I'm not telling what I did; but when they joined me at the auto I was all rested and had my breath back.

Cullen had just come in from the English front, where he and Ford spent two weeks. Ford remained in Paris to get the rattle out of his knees before seeing us. Stirling and I go as a detail to the English front next week.

Torrey has been to the English front, too. He went through some shrapnel fire with a couple of French officers who were discussing wild celery and not seeming to notice the shells. Torrey said he didn't wonder the celery was wild.

Our work here does not amount to a great deal as yet, but will in the very near future. We do not know the exact date when our men will take a very active part in the fighting, but have a fairly good idea.

I do not know what the general opinion is in America concerning the duration of the war, but I do hope the people at home are not too optimistic. I know—and know absolutely—that there will be no military victory for another year. The Boche can retreat for months over good roads and leave them impassable after him. Judging from the clippings I occasionally see from home papers, the writers there figure on man power alone, which to me seems a minor matter. If these people could see the acres of ammunition and supplies it takes to make a three or four-day offensive, and if they could see the miles of trucks needed to bring this stuff up while under fire, then they would realize that no matter what the number of men might be, they can only go so far and be supplied.

The food conditions here and in England are good, and the morale of the troops is good, which things give us a big advantage over Germany. Also, our coming into the war has made a wonderful moral effect on the Allies; but we have talked too much and, I'm afraid, we must do the almost impossible to live up to the reputation we have helped ourselves to.

You think I'm a pessimist; I'm not. I do not for one moment doubt what the final outcome must be, but I do fear that a peace may be made which will not in any way repay the Allies for their losses. I sincerely hope that we will fight all next year and then dictate peace to what will be left of a once powerful nation. I am lonesome and want to be back in Detroit, but not before we have achieved a military victory.

Now I must run about and try to get warm. My hands are blue and stiff, and Dunk Campbell has just come in with his collar rolled up, asking that someone take a walk with him. Since I'm the only someone here, I guess it's up to me.

Remember me to Guy and my other friends around the club. Try to come over if you can manage things.

AL.

(Capt. Alfred D. La Ferte, M. R. C.)

Lansing, October 31, 1917.

Dr. F. C. Warnshuis, Secretary,  
Michigan State Medical Society,  
91 Monroe Avenue, Grand Rapids, Mich.

Dear Sir:

In response to your letter of October 29th, as soon as one is appointed in the Medical Officers' Reserve Corps, he should tender his resignation as a member of the Local Draft Board on account of his connection with the military service, and as a matter, of course, it must be adopted.

It is suggested for our benefit that one find and recommend a suitable officer to succeed himself if practicable.

Respectfully,

JOHN S. BERSEY,  
Adjutant General.

Ann Arbor, Oct. 27, 1917.

Dear Doctor:

In dealing with patients from all parts of the State, I find that many of them have been misinformed regarding our rates and requirements for admission, by their home physicians. This, I presume, is due to the fact that the hospital did not notify each individual physician when changes were made but only gave that information through the newspapers, expecting the majority to get it in that way.

In order to correct false impressions about our regulations I am sending you herewith copy of our circular giving general information. This circular contains also a copy of the State Law providing for the care of indigent children at the expense of the State. With this I am also sending a copy of the State Law providing for the care of indigent adults at the expense of the County. Many of our physicians, I believe, are not familiar with these laws.

One part of our circular to which I wish to call your special attention is that pertaining to the classes of patients entitled to admission to the hospital. We accept the following five classes: (1) Those provided for by statute, (2) Emergency cases, (3) All students of the University, (4) Persons bringing recommendation from their home physician, and (5) Those signing affidavits stating that they are unable to pay the usual minimum fee charged for those services by the profession.

There seems to be a general feeling among the practicing physicians in the State that the University Hospital is competing with them, but if the truth be known, it will be found that it is actually endeavoring to co-operate. No exceptions are made to the above rules for admitting patients and many are sent away every month because they came to us in order to avoid paying a fair price to their home physician. You can see that under these rules our work can not harm the business of the outside physician unless patient should make false affidavit. On

all cases referred to us by outside physicians we send reports giving diagnosis, treatment given, and advise as to future care. In this way we are of assistance to many physicians in taking care of patients they themselves do not wish to handle. Our aim is always to help rather than to hinder the outside physician. If a any time we can be of assistance to you, do not fail to call upon us.

Yours sincerely,

ROBERT G. GREVE, Superintendent.

### UNIVERSITY HOSPITAL.

The University Hospital is situated in the north-eastern part of the city of Ann Arbor, to which place it was removed from the University Campus in 1891. The buildings are provided with all the modern improvements in hospital architecture. The laboratories are equipped with all necessary apparatus of the scientific investigation of disease, and the most perfect instruments for the use of the X-rays in diagnosis are provided.

A new contagious disease ward has been recently erected and equipped with all the latest modern conveniences for the isolation and care of all communicable diseases, which insures greater protection to all patients coming to the hospital for treatment.

The primary object in the establishment of a University Hospital was to provide facilities for clinical instruction to medical students. Therefore, patients coming to the hospital for treatment, are made use of for the education of students, in the appearance and management of diseases, whereby they are better fitted to become reliable and efficient practitioners. In the use of patients for this important purpose, the utmost caution is exercised to avoid anything that is calculated to offend their sensibilities, and their interest and welfare are at all times most sacredly guarded by those to whom the care of the Hospital is intrusted. Private patients are not received at the Hospital.

The attention of Supervisors and Superintendents of the Poor of the various counties is invited to the opportunity here afforded for the relief of cases frequently met with in County Homes, who are often permitted to languish and sometimes die for want of special appliances for their relief or cure, only to be furnished by a well-equipped hospital.

The attention of officials mentioned, and of others interested, is called to the fact that indigent persons not actually in County Homes may also be sent for treatment at the expense of the county or town. By the trivial expense incurred in transportation and board, many sufferers may in this way be relieved and made self-sustaining, and an important saving to the state be thus secured. Patients coming to the hospital as provided above, must bring a letter from the proper officials guaranteeing their expenses.

When a Superintendent of the Poor or Supervisor desires to send a patient to the hospital at the County's expense, all that is necessary is to send a letter, guaranteeing their board and care and they will be admitted on their arrival. It is not necessary to make any previous arrangements as County and State cases are always admitted on arrival and taken care of at once. They are carefully watched and

are not detained a day longer than is absolutely necessary. The bill for the board and care will be rendered when the patients are discharged.

Dependent children, inmates of the State Public School at Coldwater, the Michigan School for the Blind, the Michigan School for the Deaf, and the Michigan Home and Training School, or those who would be entitled by the laws of the State to admission to such institutions, also children of indigent people, who are afflicted with any curable malady or deformity, are received for treatment at the expense of the State.

### ACT No. 274 OF THE PUBLIC ACTS OF 1913.

An act to provide for the medical and surgical treatment of children who are afflicted with a curable malady or deformity, and whose parents are unable to provide proper treatment, providing for the expenses thereof, and prescribing the jurisdiction of the probate court in such cases.

#### *The People of the State of Michigan Enact:*

Section 1. Whenever any agent of the board of corrections and charities, supervisor, superintendent of the poor, or physician, shall find within his county any child who is deformed or afflicted with a malady which can be remedied, and whose parents or guardians are unable to provide proper care and treatment, it shall be the duty of such agent, supervisor, superintendent of the poor, or physician, to make a report of such condition to the probate judge of the county in which such child resides. Upon the filing of such a report with the judge of probate it shall be his duty to cause a thorough investigation to be made through the county agent, or a superintendent of the poor, and a physician appointed by him for that purpose.

Section 2. If upon investigation the judge of probate is satisfied that the parents or guardians are unable to provide proper medical or surgical treatment, and the physician appointed to make the examination shall certify that, in his opinion, the deformity or malady is of such a nature that it can be remedied, the judge of probate may enter an order directing that said child be conveyed to the university hospital at Ann Arbor for free treatment to be paid for by the State as hereinafter provided: Provided, That no such child shall be sent to or received into said hospital unless in the judgment of the physician in charge thereof, there is a reasonable chance for him to be benefitted by the proposed medical or surgical treatment, and for this purpose a complete history of the case shall be furnished by the examining physician.

Section 3. It shall be the duty of the superintendent of the University of Michigan hospital, upon receiving such child, to provide for such child a cot or bed or room in the University hospital, and he shall also assign or designate the clinic of the University hospital to which the patient shall be assigned for the treatment of the deformity or malady in each particular case, the care and treatment of such child, and the physician or surgeon in charge shall proceed with all proper speed to perform such operation and bestow such treatment upon such child as in his judgment shall be proper.

Section 4. No compensation shall be charged or



allowed to the admitting physician of said hospital, or to the physician or surgeon or nurse who shall treat said child, other than the salary respectively received from the board of regents of the University of Michigan.

Section 5. The superintendent of the University hospital shall keep a correct account of the medicine, nursing, food and necessities furnished to said child, and shall make and file with the auditor general, an affidavit containing an itemized statement as far as possible of the expenses incurred at said hospital in the treatment, nursing and care of said child in accordance with the rates fixed by the regents.

Section 6. Upon filing said affidavit with the auditor general, it shall be the duty of said auditor general forthwith to draw an order on the treasurer of the State of Michigan for the amount of such expenditure, and forward the same to the treasurer of the University of Michigan. It shall be the duty of the auditor general upon receipt thereof to credit the amount thereof to the University of Michigan, in accordance with his warrant drawn by him for the University hospital.

Section 7. The county agent or superintendent of the poor shall receive the sum of three dollars per day, except in counties where such officer or officers shall receive a fixed salary, and his actual expenses, while making the investigation herein provided, upon the order of the judge of probate. All claims of the county agent or superintendent of the poor for making the investigations, and actual traveling expenses and a fee of five dollars for the physician for making the examination upon the order of the probate judge under the provisions of this act, and all expenses incurred in conveying such children to and from the University hospital shall, when approved by the judge of probate ordering such services, be audited by the auditor general and paid out of the general fund. The expenses of sending such children home may be paid by the hospital and charged in the regular bill for maintenance in the discretion of the superintendent of the hospital when he is satisfied that the parents or guardians are unable to bear such necessary expense.

Patients coming to the Hospital must be prepared to stay two or three days if necessary, in order to secure a thorough examination. There are often more patients presenting themselves for treatment than can properly be attended during the clinic hour. Those, who cannot receive their examinations during the clinic hour immediately following their arrival, will receive necessary attention at once in the Hospital wards, but must remain until they can be properly presented to the class, when so required by the attending physician or surgeon.

Owing to the large number applying for admission to the Hospital, it is often necessary for patients to find temporary accommodations in neighboring houses; such are received in the order of their registration. Boarding houses will be secured for those desiring on application at the Superintendent's office.

When such condition exists, applications from out of town will not be considered until those, who are waiting, can be accommodated.

Patients registered as noted above will be con-

sidered "out patients" and will receive examinations and treatment when practicable.

Patients are not allowed to board outside the Hospital when there are beds available for them in it.

Each ward has its nurse, who is in charge thereof. Patients will not leave the building without her permission.

The Hospital is open throughout the year, clinics being conducted during the summer by the assistants.

Patients coming to the hospital, should on their arrival at Ann Arbor, request to be taken to the Regular Hospital. Much delay and confusion would thereby be prevented. If physicians or others, in sending patients would give them a personal letter, either to the Clinical Professor under whose care they would come, or to the Superintendent, mistakes would often be avoided.

Patients are admitted or discharged between the hours of 8 a. m. and 5 p. m.—Saturday afternoons, holidays and Sundays excepted. If due notice is given, an ambulance will meet the train, for which extra charge will be made.

When patients enter the hospital, they must make a deposit for bed, board and care for eight days in advance. If they remain longer than eight days, they must keep on deposit an amount for eight days in advance until they are ready to leave the hospital. Any balance remaining to the patient's credit will be refunded when he is discharged.

The deposit to be made by residents of Michigan for bed, board and care in the ward for eight days in advance shall be sixteen dollars (\$16.00). For bed, board and care in a private room for eight days in advance the deposit shall be twenty-nine dollars (\$29.00).

The deposit to be made by those who reside outside of Michigan for bed, board and care in the ward for eight days in advance shall be eighteen dollars (\$18.00). For bed, board and care in a private room for eight days in advance the deposit shall be thirty-two dollars, (\$32.00).

The above deposit credited to the patient's account is used for the patient's bed, board and care by charging the following daily rates: Those, who reside in Michigan, shall be charged for bed, board and care in the ward two dollars (\$2.00) per day. Those, who reside in Michigan, shall be charged for bed and board in a private room two dollars and sixty cents (\$2.60) per day.

If part of the time of a nurse is necessary in giving special care, a charge of one dollar (\$1.00) per day shall be made; if the entire time of a nurse is necessary in giving special care, a charge of two dollars (\$2.00) per day shall be made; it being understood that we term a day is twenty-four hours, including day and night.

Those, who reside outside of Michigan, shall be charged for bed, board and care in the ward two dollars and twenty-five cents (\$2.25) per day. Those, who reside outside of Michigan, shall be charged for bed and board in a private room three dollars (\$3.00) per day.

If part of the time of a nurse is necessary in giving special care, a charge of one dollar (\$1.00) per day shall be made; if the entire time of a nurse is

necessary in giving special care, a charge of two dollars (\$2.00) per day shall be made. Twenty-four hours constitute what we term a day.

For anaesthetization a fee of five dollars (\$5.00) is charged; local anaesthetic from fifty cents (50c) to two dollars (\$2.00).

An extra charge is made for X-rays, according to size of the plates used.

For special serum treatments an extra charge is made according to the number of treatments prescribed.

The charges in the new contagious disease hospital shall be two dollars and fifty cents (\$2.50) per day with one dollar (\$1.00) per day additional for nursing with the following two exceptions:

(a) When the patient has the undivided attention of one nurse of the regular hospital staff, the charge for nursing shall be two dollars (\$2.00) per day.

(b) When, for any reason, it is necessary to hire an outside graduate nurse, the wages and board of the nurse shall be paid by the patient.

All rates include the day the patients enter and the day they are discharged from the hospital, no matter at what hour. Fractions of days are not considered.

Before operation a deposit must be made with the Superintendent of an amount sufficient to pay all expenses from the time of operation until the patient ordinarily would be ready to leave the hospital. For major operations the amount is eighty dollars (\$80.00). For minor operations thirty-five to fifty dollars (\$35 to \$50).

Any balance of a deposit will be refunded to the patient when discharged.

No charge is made for operations.

No charge is made for examinations except where X-rays are necessary, in which case a nominal charge is made to cover the cost of plates, etc. Patients not entering the hospital will be required to pay for X-rays, electrical treatments, medicine and dressings as prescribed.

Wives expecting operations should bring the written consent of their husbands for such operations. Minors should bring written consent of parents or guardians.

Patients are advised to deposit their money with the Superintendent and take his receipt for the same, otherwise it will be entirely at their own risk. Checks, drafts, express and postal money orders will be received on deposit and receipt given therefor.

Every possible precaution is taken to prevent contagious disease. However, the hospital does not guarantee against it. Patients, who may be detained on this account, will be required to pay the regular rates for board and care.

The visiting hour is between two and three o'clock each day. Visits may be terminated at any time by the nurse in charge, when it is deemed wise for the welfare of the patient.

When patients are seriously ill, relatives or friends may visit them at any time, day or night.

The hospital will not be responsible for valuables left any place but the Superintendent's office. All

clothing must be turned over to the nurse in charge of the ward, who will list it and put it in the baggage room. All unnecessary clothing should be sent home. Patients must be supplied with sufficient clothing, not less than three suits of underclothing, four night robes, slippers, bath-robe, kimona or house dress.

#### CLINIC DAYS.

Surgery: Monday and Thursday at 3:00 p. m.

Internal Medicine: Tuesday and Friday at 1:30 p. m.

Eye, Ear, Nose and Throat: Monday and Thursday at 9:00 a. m.

Diseases of Women and Obstetrics: Tuesday and Friday at 9:00 a. m.

Nervous and Mental Diseases: Wednesday at 2:30 p. m.

Diseases of the Skin: Wednesday at 1:30 p. m.

Applications for information regarding the admission of patients should state whether the patient is a man, woman or child and if a child how old.

Cases requiring it can have the benefit of the united attention of the whole Faculty at any time. As a rule, however, they are divided according to the respective ailments as follows:

General Surgical Cases. Under the care of Charles B. G. de Nancrede, M.D., LL.D., Professor of Surgery and Clinical Surgery and Director of the Surgical Clinics; Cyrenus G. Darling, M.D., Clinical Professor, of Surgery; Ira D. Loree, M.D., Clinical Professor of Genito-Urinary Diseases.

General Medical Cases. Under the care of.....Professor of Internal Medicine and Director of Clinical Laboratory; David M. Cowie, M.D., Clinical Professor of Pediatrics and Internal Medicine.

Diseases of Women and Obstetrics. Under the care of Reuben Peterson, A.B., M.D., Bates Professor of Obstetrics and Diseases of Women.

Diseases of the Mind and Nervous System. Under the care of Albert M. Barrett, A.B., M.D., Professor of Psychiatry and Diseases of the Nervous System; Carl D. Camp, M.D., Clinical Professor of the Diseases of the Nervous System.

Diseases of the Ear, Nose and Throat. Under the care of R. Bishop Canfield, A.B., M.D., Professor of Oto-Laryngology.

Diseases of the Eye. Under the care of Walter R. Parker, B.S., M.D., Professor of Ophthalmology.

Diseases of the Skin. Under the care of Udo J. Wile, M.D., Clinical Professor of Dermatology and Syphilology.

#### PATIENTS ENTITLED TO ADMISSION.

The Regents of the University of Michigan direct that the following classes of patients are entitled to admission to the University Hospital for examination and treatment:

1. Those, whose admission is provided for by special statute, patients sent on an order from the Superintendent of the Poor, Supervisor or City Official, being authorized to issue such an order; children sent on an order from the Probate Judge



as provided for in Act 274 P. A. 1913. (See Copy of law elsewhere in this article).

2. Emergency cases.

3. All students in actual attendance at the University.

4. All persons bringing letters to the Superintendent, recommending their admission from their usual medical attendant.

5. Persons not included in any of the four classes above mentioned, in accordance with the rules prescribed by the Regents may register for examination and admission by making the following affidavit.

I hereby make affidavit that I am..... financially unable to pay the usual minimum fee of the profession for such medical or surgical treatment as I.....may require.

Date.....19....

Signed .....

P. O. Address.....

Subscribed and sworn to before me this.....

day of.....19....

.....  
Notary Public for Washtenaw County.

My commission expires.....19....

#### MATERNITY SERVICE.

Patients are admitted anytime previous to confinement, and charged for maintenance at the rate of two dollars and fifty cents (\$2.50) per week. No charge is made for maintenance for two weeks following confinement. If, after confinement and at the expiration of two weeks, the patient remains for further treatment, she will be subject to the regular hospital rates.

If the baby is left at the hospital for adoption, a charge of ten dollars (\$10.00) shall be made for the care of the baby for six weeks. A charge of ten dollars (\$10.00) for transportation shall also be made for taking the baby from the hospital.

Patients entering the maternity cottage are expected to assist with the housework, care for their own rooms, help with plain sewing, prepare vegetables, fruits, etc., as may be directed by the nurse and her assistants.

## Deaths

**Dr. Sara Goff** died of apoplexy at her home at Montrose on November 5th. In March, 1916, she had the first stroke and has been an invalid since that time. She was the wife of Dr. C. W. Goff and had practiced medicine with him in Montrose for a number of years.

## State News Notes

### TO OFFICERS OF THE MEDICAL RESERVE CORPS U. S. ARMY INACTIVE LIST.

Word received from the Surgeon General of the U. S. Army, conveys the information to officers of the Medical Reserve Corps of the United States Army, inactive list, that assignment to active duty may be delayed, and that they are advised to continue their civilian activities, pending receipt of orders. They will be given at least five days notice when services are required.

### MICHIGAN STATE BOARD OF REGISTRATION IN MEDICINE.—COMMITTEES FOR 1917-1919.

#### STANDARD AND COLLEGE.

Dr. F. C. Warnshuis, Chairman, Dr. Albertus Nyland, Dr. Nelson McLaughlin, Dr. Enos C. Kinsman.

#### REGISTRATION.

Dr. Guy L. Connor, Chairman, Dr. Duncan A. Cameron, Dr. Enos C. Kinsman, Dr. Andrew L. Robinson.

#### LEGISLATION.

Dr. Albertus Nyland, Chairman, Dr. William Samuel Shipp, Dr. Andrew L. Robinson, Dr. Enos C. Kinsman.

#### EXAMINATION.

Dr. Arthur M. Hume, Chairman, Dr. Enos C. Kinsman, Dr. Nelson McLaughlin, Dr. Duncan A. Cameron.

#### AUDITING AND SUPPLY.

Dr. Nelson McLaughlin, Chairman, Dr. Duncan A. Cameron, Dr. Guy L. Connor, Dr. William Samuel Shipp.

The Staff of Butterworth Hospital, Grand Rapids, recognize that much profit and valuable observations may be derived from the Reporting and Discussion of the cases and methods of treatment employed in groups of cases coming under their care in their hospital service. To realize these benefits it has been determined to hold a Clinical Staff Meeting each month on the regular meeting day and to that end the following program was arranged for Monday, November 5, 1917:

4:00 P. M.

Large Operating Room.

1. Mammary Cancer.  
Pathology. Dr. Henry J. Vanden Berg  
Treatment. Dr. R. R. Smith.
2. Discussion of 100 Cases of Pernicious Anemia.  
Dr. J. S. Brotherhood.
3. Demonstration of Methods for the Immobilization of Fractured Bones.  
Dr. F. C. Warnshuis.
4. Dinner. A dinner will be tendered to the Staff and visiting guests at 7 p. m. by the Chief of Staff.

Dr. R. F. Webb.

5. A paper on Cerebro-Spinal Meningitis,  
Dr. J. B. Whinery.

A cordial invitation is extended to every physician in Western Michigan to attend these meetings.

The Staff, Butterworth Hospital,  
G. H. SOUTHWICK, M.D., Secretary.

"Three things make manhood's estate," said the wise old Brahmin, "his work in life, his going into the wars and his taking of a wife."

Capt. Charles Barton, up to a few weeks ago Dr. Charles Barton, with offices in the Kresge building, Detroit, has, therefore, come into man's estate, for in addition to his profession he joined the colors and this week was married in Louisville, Ky., to Miss Henrietta Kiescow, of Kansas City.

The wedding was one of the largest military-society weddings that has been staged in the Kentucky city since the days of '61. It was held in the old Durrett place, a blue-grass mansion that once served as headquarters for Morgan and his hard-riding cavalymen. The altar was covered with the flags of allies and with flowers and the aisles were bowered with magnolia. A shelter tent was used to kneel upon.

A military band furnished the music and the entire commissioned staff at the camp was in attendance. Luncheon was served under the trees in the yard. There will be no honeymoon until after the war.

Dr. Barton practiced in Toledo several years before coming to Detroit. He is a graduate of the University of Michigan.

An auxiliary clinical staff has been formed in the Homeopathic Medical school to assist in carrying on the work of Dr. H. M. Beebe, former professor in surgery in the school, who has been called to government service.

The staff consists of the following men: Dr. John M. Lee, of Rochester, N. Y.; Dr. G. L. LeFevre, Muskegon; Dr. F. A. Kelley, Detroit, and Dr. W. G. Patterson, Detroit.

A number of other doctors will lend assistance from time to time.

Early Friday, Base Hospital unit No. 36, of which Dr. B. R. Shurly is director, broke camp in state fair grounds and entrained for a point on the Atlantic seaboard. Destination was secret.

Since departure of Harper base unit for France Shurly unit has occupied the fair grounds camp. Numbering among the 100 men are some of the most proficient surgeons and physicians of Detroit.

Those closely in touch with affairs of the unit believe the men will be on the eastern coast but a short time before departing for France. The unit is said to have the most complete supply of instrument and accessories of any base hospital unit trained in this country.

With his formal acceptance of the chair, Dr. T. G. Yeomans of St. Joseph became professor of gynecology in the Homeopathic college of the Uni-

versity of Michigan. He will succeed Prof. C. B. Kinyon, one of the most distinguished surgeons and medical authorities in the country, who resigns the professorship after twenty years of service at the state university.

A year and a day in the federal prison at Leavenworth, Kan., was the sentence imposed on Dr. Albert E. Cottingham of Ionia by Judge Sessions Thursday. Dr. Cottingham pleaded guilty to the charge of having sent obscene matter through the mails.

Dr. William De Kleine, of Flint, was elected president of the Michigan Anti-Tuberculosis association, to succeed Dr. Arthur F. Fisher, of Hancock, who refused to run again. Other officers are: Vice-President, Dr. C. G. Parnall, of Jackson; Secretary, Dr. H. J. Hartz, of Detroit.

Dr. A. S. Warthin, of Ann Arbor, urged the Association to do what it could to aid those rejected in the draft back to regain health and to bring pressure on the government to build sanitariums and make other provisions for soldiers who have contracted tuberculosis.

Dr. Charles P. Drury of Ann Arbor, well known throughout the state as an authority on health, has been appointed health officer of Marquette and will arrive to take up his work November 5. For the past two years Dr. Drury has been on the staff of the University of Michigan health service. He is said to be one of the most efficient health experts in the state.

Wayne county doctors now at the front will be remembered Christmas by physicians at home. A fund is now being raised to purchase Christmas gift boxes for them. Dr. C. Hollister Judd, 1229-1239 Whitney building, Detroit, is heading a committee to receive funds.

Dr. Morison resigned as health officer of Sturgis in order that he may have a little time in which to arrange his personal affairs before leaving for the front with the medical corps. His place will be taken by Dr. Watkins, who was named by Mayor Spence.

Dr. Morison has made one of the most capable health officers the city has ever had and during his period of office has done a great deal to improve the health conditions of the city. That the work will be carried on with equal energy is assured by the appointment of Dr. Watkins.

Dr. James E. Davis and Dr. Allison B. Toaz, of Detroit, announce that they will have as an associate William R. Vis, A.B., M.D., formerly of the University of Michigan Hospital Staff.

Dr. William R. Stringham is recovering from a severe illness, due to an infected hand, which has cost him the loss of one finger. The doctor is in Mercy Hospital, Bay City, Mich.



COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. County Secretaries are urged to send in these reports promptly

GENESEE COUNTY

The annual meeting of the Genesee County Medical Society was held Nov. 24, 1917, at 3:30 p. m. in the Elks Temple, Flint. President Handy in the chair.

Drs. Diamond and Paull were appointed tellers to count the sealed nomination ballots.

Secretary's report in membership was read and accepted which is as follows:

At the beginning of the year there were eighty members.

The present membership is: Honorary, 1; active members, 95; new members taken during the year, 19; lost one member by death, Dr. Shank; nineteen members are at present in the Government service. There are other physicians from the city also in the service. There are nine or ten other physicians in the county who are not members of the society.

The Treasurer's report was read and accepted, which is as follows:

Receipts.	
Cash balance at the beginning of the year ..\$	59.93
87 members at \$5.00 .....	435.00
2 members for one-half year at \$2.50 .....	5.00
Interest on certificate of deposit .....	3.00
Total .....	\$501.00
Disbursements.	
To Mich. State Med. Soc., 87 mem. @ \$3.50	\$304.50
To Mich. State Med. Soc., 2 mem. @ \$1.75	3.50
To rent .....	14.00
To speakers expenses .....	42.75
To telephone tolls .....	1.15
To stamps .....	9.00
To stationery .....	11.25
To flowers .....	20.00
To advertising .....	4.50
To printing .....	12.00
Total.....	\$422.85
Total amount of receipts .....	\$501.85
Total amount of disbursements .....	422.65

	\$79.20
To one Liberty Bond .....	50.00
Nov. 1st, 1917—Cash balance in bank .....	\$ 29.20

F. B. MINER, Treasurer.

Captain H. E. Randall gave an informal talk on "The Physicians in the Army."

Dr. Paull then read the result of the 45 nominating ballots.

- Nominations.
- For President—Drs. Manwaring and O'Neil.  
For Vice-President—Drs. Orr and Reynolds.  
For Secretary—Drs. D. D. Knapp and Miner.

- For Treasurer—Drs. Benson and Miner.  
For Medico-Legal Officer—Drs. Conover and Niles  
For Director for Five Years—Drs. Burnell and Manwaring.  
For Delegate for Two Years—Drs. Benson and Chapel.  
For Alternate Delegate—Drs. Reeder and O'Neil.  
Motion by Dr. O'Neil that the rules be suspended and that Dr. Manwaring be elected President. Carried and Dr. Manwaring was elected by acclamation.  
Ballots were prepared for the remaining officers and the following were elected:  
Vice-President—Dr. J. W. Orr.  
Secretary—Dr. D. D. Knapp.  
Treasurer—Dr. J. C. Benson.  
Medico-Legal Officer—Dr. H. R. Niles.  
Director for Five Years—Dr. B. C. Burnell.  
Delegate for Two Years—Dr. J. C. Benson.  
Alternate Delegate—Dr. C. H. O'Neil.

On motion a committee on war propaganda, to investigate and report to the Surgeon General cases of partial disability that are successfully pursuing gainful occupations, was appointed by the chair.

Dr. A. A. Patterson, Dr. E. G. Diamond and F. L. Tupper were appointed.

An application for membership from Dr. Dwight Goodrich, of Flint, was read.

Motion made that he be elected to membership. Carried.

Motion made and carried that the society should purchase a \$50.00 Liberty Bond.

Motion made and carried that a rising vote of thanks be extended to our retiring president, Dr. Hardy.

Motion was made and carried that a similar vote of thanks be extended to the retiring treasurer, Dr. Miner.

Dr. Wm. H. Marshall was then introduced and presented a paper upon "Soldiers Heart" as studied in the Base Hospital wards in England. After the discussion the meeting was adjourned for supper in the grill room.

At 8 p. m. the meeting was called to order and Dr. Wm. M. McDonald of Detroit was introduced and gave a talk upon "The Modern Conception of Pneumonia." A full discussion followed.

Meeting adjourned.  
F. B. MINER, Secretary pro tem.

Meeting called to order by President Handy. Dr. Miner was appointed secretary pro tem to fill the vacancy until the annual meeting, Dr. Morrish having been called to service in the army.  
Report of Patriotic Committee, consisting of Drs.

Tupper, Wheelock, Burnell, Niles, and Pres. ex-officio, was read and is appended. Motion made and carried that the report be accepted and adopted. Motion made and carried that the above committee be continued, that it elect its own officers, and that the society secretary be a member of this committee ex-officio.

Motion made and carried that the county dues of members in the military service be suspended during the period of the present war, and if the state dues are not suspended that they be paid by the patriotic committee.

Motion made and carried that the patriotic committee be empowered to levy a tax of five dollars per member whenever it seems necessary.

Following is the report of the Patriotic Committee To the Genesee County Medical Society:

Your Patriotic Committee desires to report: That it is the sense of the Committee that the families of those physicians, members of this society, who who have been or shall be called to duty with the army, will be best served by aid rendered by the society as conditions may require.

That the physicians who have already entered the government service be advised of this action, and be assured that their families and home interests have the unanimous support of this society, and that all cases requiring assistance will receive prompt attention if notice reaches any officer or member of the society.

Any expense incurred to be paid from the treasury—a suitable fund being maintained by assessment against the members of the society.

Respectfully submitted,

Patriotic Committee,

H. R. NILES, Secretary and Treasurer.

#### ROLL OF HONOR.

Captain M. W. Clift, M. R. C., Base Hospital No. 36, Mich. State Fair Grounds, Highland Park, Mich.

Captain H. E. Randall, M. R. C., Base Hospital No. 36, Michigan State Fair Grounds, Highland Park, Mich.

Captain F. A. Roberts, M. R. C., Ambulance Co. No. 42, Camp Taylor, Louisville, Ky.

Captain E. C. Rumor, M. O. T. C., Co. 9, Fort Benj. Harrison, Indianapolis, Ind.

Capt. Walter H. Winchester, M. R. C., Ambulance No. 3 (21) Camp Dodge, Iowa.

First Lieut. G. H. Bahlman, M. R. C., Jennings Hotel, Ann Arbor, Mich.

First Lieut. C. S. Ballard, M. R. C. Co. 9, Fort Riley, Kansas.

Dr. Fred Burt, M. O. T. C., Fort Benjamin Harrison, Ind.

First Lieut. Henry Cook, M. R. C., Reported safe, "Somewhere across seas."

Dr. V. H. de Someskoy, M. O. T. C., Co. 4, Barracks A, Fort Benjamin Harrison, Ind.

First Lieut. J. W. Evers, M. R. C. Co. 9, Fort Riley, Kansas.

First Lieut. Geo. R. Goering, M. R. C., Camp Grant, Rockford, Ill., c-o Col. Brooks Brigade, Officers' Quarters, 1350 North.

Dr. Benj. Goodfellow, M. O. T. C., Fort Benj. Harrison, Indiana.

\*First Lieut. H. C. Hackman, M. R. C., 226 East Kearsley St., Flint, Mich.

First Lieut. Ivan Lillie, M. R. C., Chattanooga, Tenn.

First Lieut. R. S. Morrish, M. R. C., Base Hospital, Fort Shelby, Hattiesburg, Miss.

First Lieut. A. V. Murtha, M. R. C., Ambulance No. 3 (21), Camp Dodge, Iowa.

\*First Lieut. Bruce McDuff, M. R. C., Ambulance No. 3 (21), Camp Dodge, Iowa.

First Lieut. R. L. Phillips, M. R. C., Ambulance No. 3 (21), Camp Dodge, Iowa.

First Lieut. G. K. Pratt M. R. C., c-o Base Hospital, Camp Beauregard, Alexandria, La.

First Lieut. W. C. Reid, M. R. C., Squadron 100, Mineola, N. Y.

\*First Lieut. M. R. Sutton, M. R. C., Ambulance No. 3 (21), Camp Dodge, Iowa.

#### RESIDENT MEMBERS.

Drs. E. I. Allen, B. C. Burnell, G. D. Briggs, Wm. G. Bird, John C. Benson, D. C. Bell, E. H. Bailey, Noah Bates, C. B. Burr, A. C. Blakeley, F. H. Callow, E. R. Campbell, C. D. Chapell, T. S. Conover, C. P. Clark, F. L. Covert, H. E. Clarke, E. A. DeCamp, Wm. DeCline, E. G. Diamond, Lucy MacMillan Elliott, Claud G. Eaton, J. M. Galbraith, C. W. Goff, Jefferson Gould, H. W. Graham, James Houston, J. N. Houton, R. S. Halligan, J. W. Handy, A. R. Ingram, D. S. Jickling, Wm. C. Kelly, Mabel B. King, H. D. Knapp, Don D. Knapp, John J. Kurtz, L. J. Locy, O. W. McKenna, Wm. H. McCormick, J. C. McGregor, J. G. R. Manwaring, H. B. Miner, H. R. Niles, James W. Parker, D. C. Probert, A. T. Paull, Albert A. Patterson, C. H. O'Neil, J. W. Orr, J. F. Rumer, E. V. Ricker, E. D. Rice, C. P. Ramoth, A. J. Reynolds, F. C. Reeder, Joseph Schneider, B. R. Sleeman, D. C. Smith, M. B. Smith, J. W. Sooy, J. D. Stuart, H. A. Stewart, D. B. Sullivan, D. L. Treat, F. L. Tupper, W. J. Wall, A. S. Wheelock, Wm. I. Whitaker, P. E. White, L. S. Willoughby, A. G. Wright, C. F. Moll, W. H. Marshall, N. J. Malloy, James Baird, M. S. Knapp.

#### OTTAWA COUNTY

Dr. J. A. Mabbs was chosen President of the Ottawa County Medical Society at its annual meeting. Other officers chosen were: First Vice-President, Dr. J. W. VandenBerg, North Holland; Second Vice-President, Dr. G. W. Thomas, Holland; Secretary and Treasurer, Dr. H. J. Poppen, Holland.

Dr. B. B. Godfrey was chosen member of the Medico-Legal committee; Dr. J. J. Mersén was named primus delegate to the convention of the State Medical Society, and Dr. Joe DePree of Zeeland secundus delegate.

The board of directors, board of censors and the programme committee is composed of the following: Dr. T. A. Boot, Chairman, Dr. R. J. Walker, Saugatuck, Dr. A. Leenhouts, Dr. J. A. Mabbs and Dr. H. J. Poppen, secretary.

At the annual meeting Dr. Merrill Wells of Grand

\*Are not members of the local Society.



Rapids read a paper on "Some phases of recent work on Diabetes." It was scientific, instructive and practical as well, showing improved methods of treatment. Discussions of the paper and many questions answered brought out much information to those present.

Dr. Wm. J. Dubois of Grand Rapids, Medical Councilor for the 5th District, read a paper on "The Prostate—Its diseases and treatments." This most able paper, was very instructive, showing how much better results are obtained by carefully selecting our patient for surgical and medical treatments. Discussions and questions answered were certainly very beneficial to the doctors who were fortunate enough to hear Dr. Dubois.

Not only were the members benefitted by his paper but he also gave them of his own valuable councilor advice, and it certainly was a professional revival in the ranks.

The Society profited by the information and remarks of the chairman of the City Hospital committee, C. M. McLean. He showed how our hospital is progressing. The situation is most encouraging to the doctors of the city and surrounding country.

## Book Reviews

**NOSTRUMS FOR KIDNEY DISEASES AND DIABETES.**—Prepared and issued by The Propaganda Department of The Journal of the American Medical Association, 47 pages; deals with 34 nostrums; illustrated. American Medical Association, 535 North Dearborn St., Chicago. Paper, 10 cents postpaid.

This is the latest pamphlet issued by the Propaganda Department of *The Journal of the American Medical Association* as part of its work in giving the medical profession and the public the facts regarding different phases of the nostrum evil and quackery. Nostrums for kidney disease and diabetes are grouped together in one pamphlet, not because there is any essential relation between diabetes and kidney disease, but because the average quack makes no distinction between the two conditions and recommends his nostrum indiscriminately for both. It is not necessary to tell physicians that drugs will not cure either kidney disease or diabetes but it is necessary to apprise the public of this fact. Whatever justification there may be for the sale of home remedies for self-treatment, there is no excuse, either moral or economic, for selling preparations recommended for the self-treatment of such serious conditions as diabetes and kidney disease. Every "patent medicine" sold for the cure of these diseases is potentially dangerous and inherently vicious. The pamphlet is an interesting and instructive one to put in the hands of the layman.

## Miscellany

**Emetin Diarrhea.**—Emetin not rarely produced a bloody diarrhea in the course of its clinical use in the treatment of amebic dysentery. The symptoms and the gross appearance of the stools in emetin diarrhea are almost indistinguishable from those of amebic dysentery. Contrary to a prevalent opinion, children are not especially resistant to the effects of emetin and the dosage for them must be graduated with great care. (*Jour. A.M.A.*, Sept. 15, 1917, p. 916.)

**Spurious Neosalvarsan.**—"Dr." Nicholas Clements is under indictment in New York City for manufacturing and selling imitation neosalvarsan. The material was put up in packages made to resemble in outward appearance the genuine article. It proved to be common salt colored yellow. (*Jour. A.M.A.*, Sept. 15, 1917, p. 930.)

**Pierce's Anuric Tablets.**—According to the World's Dispensary Medical Association, Anuric is the newest discovery in chemistry, whereas, in fact, it is a worthless and dangerous nostrum sold as a cure for kidney disease. The A. M. A. Chemical Laboratory reports that from a qualitative analysis, Anuric Tablets contained sugar, acetate, iodid and salicylate of either sodium or potassium, quinine, aloin, hexamethylenamin and plant drugs. The composition of the tablets was so evidently irrational and absurd that an exhaustive analysis was not deemed worth while. (*Jour. A.M.A.*, Sept. 15, 1917, p. 930.)

**Venarsen.**—F. A. Brayton used Venarsen in a series of active syphilitics to determine its therapeutic value. The clinical study was made because many physicians consider this sodium cacodylate preparation as an efficient substitute for salvarsan, even referring to it as "Denver salvarsan." His study confirms the experience of others, namely, that Venarsen is worthless in the therapy of syphilis. He also reports that a venous sclerosis was produced in each case in which the drug was administered and that it is capable of producing a severe nephritis. (*Jour. Ind. State Med. Assn.*, Sept. 15, 1917, p. 339.)

**Volatile Irritants in Collapse.**—To determine the action of so-called circulatory stimulants that are commonly administered by subcutaneous injection in shock or allied conditions, Lieb and Herrick have studied the efforts of injections of alcohol, ether, camphor and ether, camphor and oil, and turpentine in animals decerebrated so that pain factor would be entirely excluded. They conclude that the transitory rise in blood pressure that these medicaments produce is entirely reflex in character. The heart plays little or no part in the process, the response being effected through the vasomotor apparatus. The use of injections of camphor in oil, or camphor in alcohol, to stimulate an anesthetized or profoundly prostrated or unconscious patient, therefore, has no experimental justification and its employment is seriously to be questioned. (*Jour. A.M.A.*, Sept. 22, 1917, p. 1008.)

*Some Miscellaneous Nostrums.*—Newspapers advertise Swift's Sure Specific for the treatment of "rheumatism" and "impure blood." The advertising matter sent out by its promoters recommends "S.S.S." for the self-treatment of syphilis. No information is offered in regard to the composition of "S.S.S." except that it contains 15 per cent. alcohol and the claim that it is "made from purely vegetable ingredients." Kaufmann's Sulphur Bitters are claimed to contain sulphur, gentian, wild cherry, aloes, eupatorium, "Tanacetum," balmony, podophyllum, "Senna Indica," calamus. It was sold as a remedy for scrofula, catarrh, salt rheum, rheumatism, etc., but the government declared these curative claims false and fraudulent (*Jour. A.M.A.*, Aug. 25, 1917, p. 663).

*Nasopharyngeal Disinfection by Hypochlorites.*—While the practical sterilization of infected wounds by means of hypochlorites has been effected, the sterilization of the nose and throat is far more difficult, especially in the case of diphtheria and meningococcus carriers. Encouraging results from the use of a hypochlorite substitute, dichloramine-T, have been reported, but these require confirmation (*Jour. A.M.A.*, Aug. 25, 1917, p. 651).

*Some Miscellaneous Nostrums.*—Limestone Phosphate is devoid of limestone. It is a mixture of sodium bicarbonate and sodium acid phosphate, which when dissolved in water yields the ordinary sodium phosphate. Parment, according to the advertising, should be used for the treatment of catarrhal deafness, head noises, catarrh of the stomach, catarrh of the bowels, loss of smell, lung trouble, asthma, bronchitis, etc. Parment appears to be an alcoholic solution containing sugar, glycerin, a small amount of chloroform and a mixture of volatile oils with oil of anise predominating. Varnesis is a "rheumatism cure" which, when analyzed some time ago, was found to contain less than 1 per cent. vegetable extractives chiefly derived from emodin-yielding drugs and capsicum. Taken according to directions, its user consumes as much alcohol as he would obtain from the consumption of a half pint of raw whisky every four and one half days. Fruitatives is sold under a meaningless statement of composition and with claims that suggest it to be a cure for paralysis, consumption, rheumatism, etc. It is probable that Fruitatives possesses no virtue not found in aloin, belladonna and strychnine pills (*Jour. A.M.A.*, Aug. 18, 1917, p. 582).

*Serum Treatment of Pneumonia.*—Rufus Cole reports that one-third of the cases of pneumonia are due to Type I pneumococci, one-third to Type II pneumococci, from 10 to 15 per cent. to Type III, and the remainder to pneumococci belonging to the fourth group. The mortality from infection with Type I and Type II are of average severity with a mortality of from 25 to 30 per cent.; those from Type III are severe and more than one-half of the patients die from this infection, while the mortality from Group IV is only about 10 to 15 per cent. Anti-pneumococcic serum is efficient only in infection from Type I, and Cole has come to the conclusion that the serum should be administered only

after it has been determined that the infection is due to this type. He reports that certain commercial serums have been found inefficient or without effect against Type I infection. He also reports his experience with commercial serums which were inefficient or inert. It is expected that the U. S. Public Health Service will soon establish a method for the standardization of antipneumococcic serum (*Jour. A.M.A.*, Aug. 18, 1917, p. 505).

*Bile, A Chologogue.*—The view that bile absorbed from the alimentary tract increases the secretion of bile, and thus acts as a true chologogue, seems to be established. The feeding of fresh bile to bile fistula dogs causes an almost constant chologogue action. The bile of the dog, sheep and pig all have this effect, and ox bile seems to be the most active chologogue. Of the bile constituents, glycocholic acid has a moderate chologogue effect, but usually causes a great drop in bile pigment output in a bile fistula dog; taurocholic acid has a strong chologogue action, but little inhibiting effect on bile pigment secretion; the bile fat has no influence on bile flow, but causes inhibition of bile pigment secretion; cholic acid has little effect on bile flow but may decrease the bile pigment output (*Jour. A.M.A.*, Aug. 4, 1917, p. 386).

*Treatment With Vaccines.*—The conditions—self-limited infections and chronic infectious processes—in which vaccine treatment has been employed make it exceedingly difficult to determine if vaccines are of value. As pointed out by J. P. Leake of the U. S. Public Health Service, whenever the use of vaccines in a certain disease has been carefully controlled, its use has been found of little value. This is true of whooping cough, typhoid fever and gonorrheal vulvovaginitis and probably in pyorrhea alveolaris. As for the strikingly favorable results in individual instances which are reported by vaccine enthusiasts and repeated in advertisements, these may all be matched by equally brilliant results in cases not treated with vaccines (*Jour. A.M.A.*, Aug. 25, 1917, p. 648).

*Trimethol.*—The Council on Pharmacy and Chemistry concludes that the claims for Trimethol are unsupported by acceptable evidence, and has declared Trimethol and the pharmaceutical preparations said to contain it—Trimethol Syrup, Trimethol Capsules and Trimethol Tablets—sold by Thos. Leeming & Co., New York, ineligible for New and Nonofficial Remedies. The Trimethol preparations are advertised for use in all conditions dependent on intestinal putrefaction, and some of the advertising claims give to "Trimethol" the scope of a panacea. A request for Trimethol having been refused by the manufacturers, the Council's bacteriologist examined one of the pharmaceutical preparations said to contain it. Although the preparation was found to be a germicide, the examination did not indicate that Trimethol had any remarkable potency or other properties suggesting that it possessed special therapeutic value (*Jour. A.M.A.*, Aug. 11, 1917, p. 485).









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